DOCUMENT RESUME

ED 126 279 95 CE 007 299

AUTHOR Ammerman, Harry L.; Pratzner, Frank C.
TITLE Occupational Survey Report on Automotive Mechanics: Task Data from Workers and Supervisors Indicating Job Relevance and Training Criticalness. [Interim Report]. Research and Development Series No. 110.
INSTITUTION Ohio State Univ., Columbus. Center for Vocational Education.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE Jan 75
CONTRACT NE-C-00-3-0078
NOTE 204p.

EDRS PRICE MF-$0.83 HC-$11.37 Plus Postage.
DESCRIPTORS Auto Mechanics; *Auto Mechanics (Occupation); Data Analysis; *Job Analysis; Occupational Information; *Research Methodology; Supervisors; Tables (Data); Task Analysis; *Task Performance

ABSTRACT

The study was conducted to develop methods for using timely, firsthand occupational task information on automotive mechanics in order to identify critical performance requirements that warrant formal training. The methodology used is described in detail. A Task Inventory Questionnaire was completed by 18 auto mechanics and 12 supervisors in each of eight participating States. The questionnaire consisted of a checklist of 380 automotive repair tasks and 12 questions about the tasks which related to job relevance, task performance, and training criticalness. Background data were gathered from auto mechanics, supervisors, and State agencies supporting the study. Responses to the questionnaire indicated 59 of the 380 task statements were identified as not a part of the job of automotive mechanics. The survey results are discussed and presented in tabulated form. Over one-half of the document consists of appended materials which include: a list of participating State agencies and their key support personnel, background characteristics of respondents, a 99-page section containing nine tables of task inventroy data, and additional task statements. (Author/EC)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED126279

Research and Development Series No. 110

OCCUPATIONAL SURVEY REPORT ON AUTOMOTIVE MECHANICS:

Task Data from Workers and Supervisors Indicating Job Relevance and Training Criticalness

Harry L. Ammerman
Frank C. Pratzner

The Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

January 1975

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

OEO 72991

An Interim Report
on a Project Conducted Under
Contract No. NE-C-00-3-0078

The material in this publication was prepared pursuant to a contract with the National Institute of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to freely express their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official National Institute of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION AND WELFARE

National Institute
of Education

THE CENTER MISSION STATEMENT

The Center for Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning and preparation. The Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

FOREWORD

The Center for Vocational Education is continuing its programmatic research efforts to develop more effective procedures for identifying valid and necessary curriculum content. One interim product of this effort is this task survey for the occupation of Automotive Mechanic. The descriptive data summarized and reported herein were collected in eight states across the nation. This survey serves as one component of a long-range and multi-faceted R&D effort directed at establishing effective procedures for identifying appropriate curricular content in vocational education and occupational training. With its focus upon the performance content of an occupation, the present report augments a parallel concern for the conceptual and affective content of training curriculums. The study was conducted at the Center within the "Methods for Curriculum Content Derivation" research and development program.

It is hoped that, while research continues on procedures for determining relevant and critical content for curricula, the task inventory data summarized in this report may also be of use to practitioners and researchers concerned with curriculum matters. The Center welcomes questions and comments which may be helpful to the research team in their ongoing efforts.

The Center expresses its appreciation to the state agencies that were responsible for administering the Task Inventory Questionnaires to workers and supervisors. The following individuals were instrumental to the success of this effort: Richard L. Barker, Deborah L. Bloxom, James L. Blue, Ross Byrd, Gloria Cooper, Griff Dye, Fern A. Green, Tom L. Hindes, Larry D. Johnson, Joseph F. Kelly, Ronald Meek, James F. Shill, William W. Stevenson, James E. Wall, Patrick J. Weagraff, and Clifford Zenor.

The Center also expresses its sincere appreciation to the many participating employees and business firms in eight states for their involvement in the study. Their cooperation and attention to this performance survey were invaluable contributions to its success.

In combination with surveys performed concurrently on two additional occupations, more than 700 employees (workers and supervisors) responded to extensive Task Inventory Questionnaires. Worker performance data, judgments about the criticalness

of performance and training, and supervisor expectations were obtained through a set of 12 experimental questions for each task of an occupation. This wide-scale application of the task survey approach represents a signal achievement for the public education system, demonstrating the feasibility of gathering such data voluntarily from a non-captive audience of many workers who are directly involved in the real-world performance situation and its requirements. Too, the cooperative network of state vocational education agencies served as an effective system for contacting local employers and workers, benefitting from the interrelations existent between the educational and the employment settings.

Robert E. Taylor
Director
The Center for Vocational Education

TABLE OF CONTENTS

FOREWORD iii

TABLE OF CONTENTS v

LIST OF TABLES vii

INTRODUCTION 1

Definition of Terms 1
Overview of the R&D Program Served by This Survey . . . 2

THE TASK INVENTORY METHOD 5

Advantages 7
Limitations 8

SURVEY DESIGN 9

Job Definitions 9
The Task Inventory Questionnaire 10
Sampling Plan 16
Network of State Agencies Providing Local Administration of Questionnaires 19
Instructions to Supporting State Agencies 19
The Task Inventory Computer System Programs 20
Characteristics of Respondents 21

RESULTS 23

Abbreviated Summary of Task Relevance Data 25
Interpretation Guide for Table 1 26
Table 1: Summaries of Task Relevance Data 30
Frequency of Use of Scale Categories 60
Consistency and Interrelationships of Task Questions . 60

IMPLICATIONS OF FINDINGS 66

Worker-Supervisor Differences 66
Some Clues Regarding Need for Training 70
Clues About Problem Areas 72
Supervisor Suggestions for Improving Performance . . . 73
Additional Comments and Suggestions 75

USE OF THE DATA 76

REFERENCES 82

APPENDIX A PARTICIPATING STATE AGENCIES AND THEIR KEY SUPPORTING PERSONNEL 83

APPENDIX B BACKGROUND CHARACTERISTICS OF RESPONDENTS 87

APPENDIX C TASK INVENTORY DATA 93

APPENDIX D TASK STATEMENTS NOT INCLUDED IN TABLE 1 193

LIST OF TABLES

TABLES		
1	Summaries of Task Relevance Data	30
2	Distribution of Individual Responses on Each Task Question	61
3	Inter-Group Correlations for Each Task Question	64
4	Task Scale Interrelationships	67
B-1	Job Title	88
B-2	Type of Business	89
B-3	Source of Training	90
B-4	Years of Experience	91
B-5	Location Contexts	92
C-1	Task Occurrence	94
C-2	Task Importance	107
C-3	Extent Task Is Part of the Job	120
C-4	Frequency of Task Performance	133
C-5	Time to Qualify	147
C-6	Learning Location	160
C-7	Supervisor Suggestions	175
C-8	Summary of Tasks by Percent of Workers Performing	189
C-9	Summary of Tasks by Percent of Supervisors Desiring Performance	191

INTRODUCTION

This occupational survey report contains a brief description of the "Task Inventory" method and a series of data tables displaying survey responses obtained for the occupation of Automotive Mechanic. Both Automotive Mechanics and supervisors of Automotive Mechanics answered task questionnaires during the first half of 1974. The summaries of the task data should be useful for secondary, postsecondary, and industrial programs of instruction.

Task Inventory Questionnaires on the work activities (tasks) of Automotive Mechanics were part of an occupational performance survey across eight states, distributed geographically throughout the nation. Employers and employees generously donated considerable amounts of time and effort. The survey was implemented through a network of eight state curriculum laboratories, research centers, and vocational education agencies. These agencies provided extensive coordination with local employers and employees, permitting effective accomplishment of the research effort.

The eight-state survey contained Task Inventory Questionnaires for three occupations: Automotive Mechanics, General Secretaries, and Business Data Programmers. Companion reports are being published concurrently for each of the other two occupations. Subsequent reports will note the use of this data to identify the more critical training content for each occupation, and demonstrate the application of the process being developed to accomplish such task selections. Earlier studies in this program reported task lists generated for each of the three different jobs, with these jobs serving as research vehicles throughout the entire project.

Definition of Terms

Several key technical terms are used throughout this survey report. They are defined here to allow the reader to differentiate between them and to understand their usage in this study.

Occupational Area: A cluster of closely related jobs, where that relationship depends upon commonly accepted groupings of jobs by reason of similarity of data systems included, type of equipment worked upon, subject-matter content needed, or technical concepts involved. Though sometimes comparable to a career ladder or lattice, a job cluster may encompass occupations of a somewhat broader

nature. An occupational area or cluster of jobs may also be labeled as an occupational field.

Job: A specific vocation, trade, profession, craft, or occupation serving as a line of work or employment, where most workers typically are called by the same or synonomous job title. A job is not limited to one employment position or one grouping of workers within a single employing firm. However, it is located at only one status level in an occupational area or career ladder, and is distributed across many employment settings.

Occupation: Same as "Job."

Duty: An arbitrary division of a job (or of an occupational area) into functional categories of related tasks for descriptive purposes. Duties are usually stated as a general area of responsibility, with action words ending in "ing" -gerunds.

Task: A meaningful unit of work activity, generally performed on the job by one worker within a limited period of time; a purposeful job-oriented activity of a worker. In most instances a task should be stated such that it would be reasonable for a worker to answer "how often" he performs that task on his job.

Task Inventory: A comprehensive listing of tasks performed by workers in a job or occupational area. When a task listing is combined with one or more questions to be asked about each task, the resulting instrument is called a Task Inventory Questionnaire.

Work Activity: Same as "Task," as used in this report. Implies a purposeful unit of work having direct value in accomplishing the goals of the job. Thus, it would not be a component part of a task such that it had value only in relation to that task, but is in fact a meaningful task of the job itself.

Overview of the R&D Program Served by This Survey

Those individuals involved in the development of vocational and occupational training programs need effective procedures to aid in the identification and selection of content with known relevance to occupational performance requirements. They need to be able to assure users of their curricula and instructional materials that the things to be learned in the training program are the things most appropriately learned there, and that when they use their materials, students will be learning skills that are important to and required for effective performance in the occupation.

The Center's research program on curriculum content is concentrating its resources on the development and testing of systematic methods and techniques. The resulting procedural models should help in the identification and selection of critical content for inclusion in vocational and occupational instruction programs. The overall study hopes to produce a comprehensive set of systematic and efficient procedures for deriving relevant and critical training content based upon requirements of work performance situations. The present report is one product of this ongoing program of methodological research.

The overall objective of the current project is the development of methods for using timely, firsthand occupational task information to identify critical performance requirements that warrant formal training. However, the methods under development are not limited only to application in this study. They are being designed for use in many occupations of interest to public education and to industrial training. When fully developed, they should be especially important for planning curricula in situations where there is uncertainty about the occupational requirements and of the critical training content.

In this identification process it is assumed that cost-effective, pre-employment training programs necessarily will not attempt to train students for all tasks performed by experienced workers in an occupation, but rather will assure inclusion of those learning requirements essential for employment and effective job performance. Thus, identification of tasks most needing training prior to employment is necessary for planning efficient training programs.

The basic issue of task selection is to identify those tasks having the greatest training criticalness, and eliminating the merely "nice-to-know" and unessential learning requirements. The intent is to have procedures to select tasks in a systematic way, using data obtained from persons most closely associated with and knowledgeable about what is in fact required on the job. By such procedures it should become feasible to make curriculum content decisions which are data based and data substantiated, instead of relying solely upon a panel of advisors or the experience of individual instructors.

Task Inventory Questionnaires are able to obtain this data base from a broad representative group of directly-knowledgeable persons. Rules for processing these data will be developed and tested. Subsequently, these rules would be applied to task data to indicate whether each task should be selected or rejected for further training consideration. The selection procedures will systematically process a large data base of task information, so it may be used more readily as an information source by those

persons who must ultimately make the curriculum content decisions; the rules for selecting tasks will not themselves actually make curriculum decisions. In later program work, there will be an attempt to identify the most efficient set of effective rules and supportive data.

For making curriculum decisions and plans, there is a real need to distinguish between that job content which is relevant to workers in the occupation and that relevant job content which is important for pre-employment training. Comprehensive listings of potential tasks performed by workers in an occupation, in conjunction with data about how many workers do and should perform each task, help establish the relevance of the tasks to that job--at least for purposes of making decisions about training programs. Though some tasks may properly belong to a particular occupation, there would seldom be a concern for pre-employment training on any task unless it would likely be performed by some minimum number of workers. Other information about task performance is also helpful in establishing a task's relevance to the job. Such information as (a) how often a worker typically does the task, (b) how important or significant the task is to the job assignment, and (c) the amount of time spent doing each task are all meaningful indicators of task relevance. These kinds of information have been traditional measures often used to describe the work that is pertinent to an occupation. This job description information is one very important determiner of what is appropriate for training, but certainly not the only necessary ingredient.

From those tasks found to be a reasonable part of the occupation (that is, job relevant to varying degrees), it then becomes meaningful to determine which of these curriculum candidates are worthy of some expenditure of instructional resources and student time. Additional kinds of task information are needed to focus attention on the critical training needs, though some of the relevance data may also be useful for this purpose. Selecting which job-relevant tasks should be of training concern is a more uncertain process than determining their performance characteristics and relevance.

Some relevant tasks may occur quite often, but be of trivial interest for pre-employment training programs. This can occur for several reasons: (a) most students could be expected to be able to do the task before entering training, (b) training could be accomplished equally well or better on the job, (c) extensive job experience may be needed to learn a task, (d) task performance may differ quite radically among employment situations such that no standard learning approach is possible, or (e) only the more experienced workers are expected to perform a particular task, such that early learning of it would not likely be retained until needed. Conversely, the learning need may be immediate and obvious.

Also, other relevant tasks may or may not be appropriate for training because of a wide range of other reasons. While full resolution of this issue cannot be expected, there are some kinds of task information that can reasonably be expected to provide important cues about areas needing training attention. Certainly useful would be knowledge of which tasks are related to on-the-job performance problems and difficulties. To benefit from the experiences and judgment of those persons who are close to the job and aware of the realities of the work situation, it would also appear useful to ask such persons where they feel each task should be learned.

For conducting research to generate reliable and meaningful selection rules there was a need to have sufficient task data to examine several options. The data gathered on Automotive Mechanics, and reported herein, partially served this need.

The next section of this report contains a brief description of the "Task Inventory" method, followed by a description of the survey design for the method as used in this study. Two sets of data summaries are then presented. A highly summarized set of data is presented first. This summary should be of use to individuals involved in curriculum development for automotive repair occupations. A set of more detailed data summaries is included in Appendix C. The detailed summary tables would seem primarily useful for reference by individuals who conduct curriculum research and occupational performance surveys. An initial version of inventory and survey procedures was described in an earlier program report (Melching & Borcher, 1973), and a revised and expanded manual of procedures is planned for the completion of this series of studies.

THE TASK INVENTORY METHOD

The "Task Inventory" method is a survey-questionnaire approach to job analysis being tested for providing performance data of use in deriving relevant and critical curriculum content for occupational training programs. Employing a comprehensive listing of job tasks, knowledgeable persons are asked one or more questions about each task. This information is then summarized in a manner suitable to the particular analyses that may be desired.

The methodology in this study is an adaptation of the process for conducting occupational task surveys developed over the past 15 years by the U.S. Air Force (Morsh & Archer, 1967; Christal, 1974). The general notion of task listings as the basis for a wide sampling of worker responses is not new, having been the form of a survey of 1,845 workers over 871 activity statements for an occupational area that was reported by Charters and Whitley 50 years ago (1924). One of their purposes at that time, as ours is

now, was to determine the job performance requirements for use in defining and justifying curricular content. Renewed interest in this form of occupational surveying was sparked by Rupe as a result of his comparative study of several job analysis methods (1956). With the advent of widely available computer processing for survey data, the survey process became quite feasible to include the capability of new and expanded possibilities for data analysis. This method is used to produce a comprehensive description of what is done by workers in a particular occupation or occupational area. It makes use of an empirical base of timely performance and criticalness data provided by persons close to the current performance of an occupation, usually workers and supervisors, representative of a wide scope of occupational performance situations.

The Task Inventory method now consists of a number of integrated steps which assist researchers and curriculum developers to move from the definition of the training and occupation of interest, through data collection and analysis, to curriculum content derivation. Elements of the process presently include:

1. Definition of the scope of the occupational training interest (such as the job setting, related jobs within an occupational area, and performance contingencies)

2. Development of a comprehensive list of potential tasks performed by workers within the work scope defined, with tasks stated at a level and in a form suitable for making curriculum plans and decisions.

3. Selection of questions to be asked about each task to provide desired descriptive data on task relevance and/or criticalness.

4. Pretesting of instructions or new question formats.

5. Design of a sampling plan to obtain representative task data.

6. Preparation, printing, and distribution of the task questionnaires (including background items on respondents, work settings, and organizations).

7. Administration of the questionnaires to workers and supervisors in accordance with the sampling design.

8. Preparation of the questionnaire data for computer processing.

9. Computation of selected descriptive summaries of response data for each task for each job, or for other population subgroups within a job.

10. Preparation of a report of data obtained from the occupational survey, for sharing with others.

11. Completion of selected analyses of the data, depending on purposes to be served.

12. Preparation of reports to be used for curriculum development and evaluation.

The current program of research seeks to establish additional elements of the process, by which task data may be used efficiently in selecting critical performance training requirements, given the determination of what tasks are relevant to an occupation of interest. The present report is a product of Element 10 above.

Advantages

There are a number of advantages to the use of the Task Inventory method. Elaborating upon advantages noted by Christal (1970), the method includes such advantages as:

1. Representativeness. Data can be collected from many persons who are directly knowledgeable of what does and should occur on the job, and this data can be separately constructed for population subgroups to permit group or situational comparisons and contrasts.

2. Economy. Data can be collected from many persons by questionnaire for less than it would cost to collect data from a few persons by standard job analysis methods. Repeated data collections permit reuse of previously constructed inventories and data. The questionnaires can be mailed and self-administered.

3. Comprehensiveness and Validity. Extensive inventories of job activities are promoted, permitting response data to point out variations in job relevance of the items, unprejudiced by preconceived notions of what is relevant and critical. Use of task recognition, rather than recall, enables respondents to provide far greater detail and completeness in the available time.

4. Comparability. Research substantiates the reliability of group responses. Standardization of items and response formats permits assessment of trends over time, and comparison with related jobs or other inventory studies. The comparative analyses permit resolution of some uncertainties with respect to regional differences and of newly emerging job types within an occupational area.

5. Quantification. The questionnaire information for the most part is quantifiable, allowing it to be stored, processed, analyzed, and reported by computer. Conventional statistical techniques may be applied in many instances to produce desired analyses.

6. Job Improvements. Clues may be obtained by certain task questions for areas and means where some job improvements might be very useful. Additional clues can be obtained for redesigning jobs and job lattices.

Limitations

The major limitations of the Task Inventory method appear at the present to include the following:

1. Response data now are limited to what is the state of affairs at the time questionnaires are administered, yielding no estimates of future requirements (though this can be tempered somewhat by repeated administrations and analysis of trends).

2. Descriptive job summaries are dependent upon the merit of the tasks originally identified. If the task listing is incomplete or the tasks poorly stated, the questionnaire data cannot compensate for this. There is a fairly high cost involved in constructing the first comprehensive list of tasks, particularly for highly skilled and professional occupations. However, this cost should be rapidly amortized through repeated usage.

3. There remains professional disagreement on how to use the questionnaire data to make specific training curriculum decisions. There is uncertainty as to what task information is needed for identifying areas of training concern. Information pertaining to job relevance is only half the picture; there is still the need to determine for which relevant tasks training is important. For routine occupations, data on "proportion of time spent on each task" or on "frequency of task performance" seem to be useful for describing tasks of relevance and significance to an occupation. However, for less-routine jobs (such as those of craftsmen, professionals, supervisors, salesmen, and others having many tasks to their job) other measures seem more meaningful, particularly the question on "the extent to which each task is a significant part of the job." Data from this survey will subsequently

be used to provide some initial resolution of this issue, particularly as it pertains to the making of training curriculum decisions. Performance data, however, do permit reasonable assessments by training personnel of what content is outdated and irrelevant in their existing curriculum.

4. There is uncertainty also as to the form and specificity for stating tasks of an applied cognitive nature, such as those tasks portraying interactions with people and with concepts. On these matters, however, there appears to be reasonable agreement among job analysts with regard to equipment--and material-oriented tasks.

SURVEY DESIGN

Questionnaires were developed and administered to obtain information on the tasks of Automotive Mechanics. The following sections describe the nature of that survey. Questionnaires were completed by both mechanics and supervisors.

Job Definitions

Automotive Mechanic was defined as follows:

> The Automotive Mechanic (DOT. No. 620.281-014) may be identified by such other job titles as:
>
> a. Automotive Mechanic
> b. Automobile Repairman
> c. Garage Mechanic
> d. Engine-Repair Mechanic
>
> In general, the Automotive Mechanic is one who repairs and overhauls automobiles, light busses, light trucks, and other automotive vehicles. They may diagnose damage or malfunctions, remove and replace units, disassemble and inspect parts for wear or servicing, overhaul units, rebuild parts, rewire electrical systems, realign or adjust units. They do not typically mend damaged body and fenders, nor install or repair accessories such as radios. They may become a specialist in one area of automobile repair, such as transmissions or engines, but must possess general skills listed above.

The definition of a Supervisor of Automotive Mechanics is given below:

> The Supervisor of Automotive Mechanics may be identified by such other titles as:

a. Service Manager
b. Garage Owner
c. Repair Shop Owner
d. Maintenance Chief
e. Service Writer
f. Chief Mechanic
g. Garage Foreman
h. Automotive Section Chief
i. Transportation-Department Foreman
j. Service Advisor

These persons supervise and coordinate the activities of Automotive Mechanics engaged in repairing, adjusting, servicing, and storing motor vehicles. They may inspect and drive repaired vehicles to verify repairs, schedule transporting of materials to service or storage areas, study repair schedules and estimate time/cost requirements, make work assignments to workers, analyze and resolve work problems, recommend or initiate personnel actions, and similar supervisory activities.

The Task Inventory Questionnaire

The Task Inventory Questionnaires used in this study consisted of a checklist of 380 automotive repair tasks and 12 questions to be answered about the tasks.[1]

The task list used in this study was composed of work activities from a variety of job types in the general occupational area of automotive repair. Thus, there also were tasks for service managers, service writers, mechanic's helpers, chief mechanics, and others. These items resulted from a process of reviewing, rewriting, testing, and modifying the task statements from a previous study of the entire cluster of automotive repair jobs (Borcher & Leiter, 1973).

The task questions used in this study, and their subsequent use for selecting the more critical performance training needs, were adapted from procedures developed for the U.S. Army by the Human Resources Research Organization (Ammerman, 1964, 1966) and

---

[1]Due to the research objective of obtaining a comprehensive data base for examining task selection procedures, the Task Inventory Questionnaires (TIQ) used in this study were unusually long. For most other purposes, a much shorter TIQ would be obtained by using fewer task questions or by distributing portions of the questionnaire over subgroups of employees. However, there usually would be a need for a larger number of employees answering each task question, to assure stability of the summary data to be obtained.

a scale of item significance developed by Hemphill (1960). These additional task questions supplement the "relative time spent" data which were gathered in the earlier study by Borcher and Leiter.

Five questions were answered by workers; that is, by Automotive Mechanics. Another seven questions were answered by supervisors of Automotive Mechanics. Worker questions are arbitrarily numbered as 1, 3, 6, 8, and 12. Four of these worker questions (1, 3, 8, 12) parallel certain of the supervisor questions (2, 4, 9, 13), differing primarily in the way a question is phrased to the particular type of employee. Supervisor questions are associated with numbers 2, 4, 7, 9, 10, 11, and 13.

The 12 questions were intended to provide two types of information. Seven questions were intended to obtain information descriptive of job relevance and task performance. Five questions were intended to obtain information concerning training criticalness. Workers responded to four questions descriptive of task performance and one question concerning training criticalness Supervisors responded to three questions descriptive of task performance and four questions concerning training criticalness The following illustrates which types of questions were to be answered by workers and by supervisors.

	Seven Questions Descriptive of Job Relevance and Task Performance	Five Questions Providing Ratings of Training Criticalness
Workers	Q1: Task Occurrence Q3: Frequency of Performance Q6: Extent Task Is Part of Position Q8: Importance to Job	Q12: Learning Location
Supervisors	Q2: Task Occurrence Q4: Frequency of Performance Q9: Importance to Job	Q7: Time to Qualify Q10: Possible to Improve Procedures Q11: Poorly Performed Task Q13: Learning Location

In brief form below are the questions and the response scales associated with each.

Question 1: Task Occurrence (Workers)

During the last year or so in your present job position as an Automotive Mechanic, which of the activities have you performed?

Response: Check mark for each task performed.

Question 2: Task Occurrence (Supervisors)

From your experience as a supervisor of one or more Automotive Mechanics, indicate which of the activities should be performed by Automotive Mechanics in your operation; that is, by such employees under your supervision in your garage or shop. Indicate which tasks your Automotive Mechanics should be doing as part of their job, even if only done once.

Response: Check mark for each task that mechanics are expected to do.

Question 3: Frequency of Performance (Workers)

How often have you been performing [illegible] activities done by you (as checked in Questi[illegible]

Categories of the Response Scale:

a. Have done, but don't normally do.
b. Less than once a year.
c. Once a year.
d. Once a month.
e. Once a week.
f. Once a day.
g. Several times each work day.

} on the average, over the last several months

Question 4: Frequency of Performance (Supervisors)

From your experience as a supervisor of one or more Automotive Mechanics, judge about how often a typical Automotive Mechanic in your operation should perform each of the activities you checked (in Question 2):

Categories of the Response Scale: Essentially identical to those of Question 3.

Question 5: Relative Time Spent (not used in this study; reported in Borcher & Leiter, 1973)

Question 6. Extent Task Is Part of the Position (Workers)

Answer this question so as to give the best description you can of what you do in your present job as an Automotive Mechanic. For each task statement, rate how significant a part of your job it is. Consider and weigh its importance, frequency of occurrence, relevance, and any other factor which you think determines to what extent the task is part of your position. In your own mind, combine these factors into a single rating of how significant a part of your job it represents.

Categories of the Response Scale:

a. Definitely not a part of my job.
b. Under unusual circumstances may be a minor part of my job.
c. (not defined)
d. (not defined)
e. A substantial part of my job.
f. (not defined)
g. (not defined)
h. A most significant part of my job.

Question 7: Time to Qualify (Supervisors)

By your standards as a supervisor of one or more Automotive Mechanics, when do you expect that a new Automotive Mechanic employee should be capable of satisfactorily performing each of the activities you checked? That is, how soon after beginning employment as an Automotive Mechanic do you feel that employees should be able to do each activity with reasonable competency?

Categories of the Response Scale:

a. Competent performance is never necessary.
b. Some number of years beyond the first 3.
c. Within the first 3 years.
d. Within the first year.
e. Within the first 6 months.
f. Within the first 3 months.
g. Within the first month.
h. Within the first week on the job.

Question 8: Task Importance to Job (Workers)

What degree of importance would you assign to each job activity you perform? Judge the importance of each activity in regard to its contribution to effective operations in your shop or garage.

Categories of the Response Scale:

a. Low importance (relatively unimportant part of the job).
b. Moderate importance (important but not essential).
c. High importance (essential part of the job that decisively influences the effectiveness of the shop or garage operations).

Question 9: Task Importance to Job (Supervisors)

Based upon your supervisory experience in your present operations, what degree of importance would you assign to each job activity that is appropriate for your Automotive Mechanics? Judge the importance of each activity in regard to its contribution to effective operations in your shop or garage.

Categories of the Response Scale: Identical to those of Question 8.

Question 10: Possible to Improve Procedures (Supervisors)

(Part 1) Based on your total experience as a supervisor of Automotive Mechanics, do you feel that for some of their work activities there could be a better or more effective way of doing the activity? That is, of the activities you checked (in Question 2), could an improvement be made on the present way in which Automotive Mechanics typically perform an activity?

Response: Check mark for each task where procedures could be improved.

(Part 2) For those activities checked as possible to improve procedures, suggest the main way for improving such procedures.

Categories of the Response Scale:

a. Provide a readable, ready-reference handbook or similar guide for use on the job.
b. Expand, correct, or clarify the existing directives on the matter.
c. Improve the content of formal school training on the matter.
d. Provide research or special study for improving the present procedures.
e. I don't know how it might be improved, but I think it can.
f. Other (comments to be written in).

Question 11: Poorly Performed Task (Supervisors)

(Part 1) Based on your total experience as a supervisor of Automotive Mechanics, do you feel that many Automotive Mechanics perform certain of their activities poorly or unsatisfactorily, even after a reasonable amount of time on the job? That is, of the activities checked (in Question 2), which ones are usually not done by experienced Automotive Mechanics as well as they could be? This is not a rating of individual mechanics, but rather an indication of activities which could be improved under the right circumstances.

Response: Check mark for each task where performance is generally unsatisfactory.

(Part 2) For those activities checked as poorly performed, suggest the main reason for such performance.

Categories of the Response Scale:

a. Lack of interest or poor attitude on the part of Automotive Mechanics.
b. Ineffective job training on the matter in formal school training programs.
c. Automotive Mechanics are overburdened with more important matters, and do not have time to perform this activity properly.
d. The activity is an extremely difficult one to master.
e. I don't know the reason, but I believe the general performance by many Automotive Mechanics is poor or unsatisfactory.
f. Other (comments to be written in).

Question 12: Learning Location (Workers)

These questions, and associated response categories, are repeated for the reader's convenience just prior to their use in the Appendix C tables, as well as in Tables 1 and 2 of the body of this report.

Categories of the Response Scale:

a. Prior to enrollment in a formal job training program.
b. In a formal training program or school, before regular employment in the job.
c. On site (such as by job experience after employment, or on-the-job training).
d. Through prior employment experience in a related or lower entry occupation.

e. Other (comments to be written in).
f. There is nothing that new Automotive Mechanics would need to learn about the activity (such as when it is not part of the job, or there is nothing of any real substance to learn).

Question 13: Learning Location (Supervisors)

From your total experience in employing and supervising Automotive Mechanics, judge where each job activity should be learned.

Categories of the Response Scale: Identical to those of Question 12.

These questions, and associated response categories, are repeated for the reader's convenience just prior to their use in the Appendix C tables, as well as in Tables 1 and 2 of the body of this report.

Sampling Plan

Not all participating employees completed each question. There were two major groups of workers and two major groups of supervisors. One group of workers and supervisors were from the states of Mississippi, Wisconsin, New Jersey, and Washington (representing the south, north central, east, and west portions of the country).[2] The second group of workers and supervisors were in the states of Ohio, Oklahoma, New Hampshire, and California (representing a somewhat comparable group of employees in the east central, west central, east, and west portions of the country).

It was intended for the Task Inventory Questionnaires to be administered to 18 mechanics and 12 supervisors in each of eight participating states, sufficient to allow for some loss and reduction as might normally be expected in a survey. Seven of the eight states were selected because of the existence of vocational curriculum management centers which were key parts of the National Network for Curriculum Coordination sponsored by the U.S. Office of Education. In two instances an alternate state,

---

[2]To augment the number of available respondents in this grouping, questionnaires from one worker and seven supervisors were included from the state of Ohio. These were from a different metropolitan area than those generally included in the alternate grouping of questionnaire respondents.

affiliated with a curriculum center, substituted in that geographic area to administer the questionnaires. Additionally, the northeast area was expanded to include a second administering state vocational agency. States with both very large and very small populations were in each group.

Employment sites ranged from large metropolitan areas to small isolated communities, with the major emphasis upon metropolitan areas. Business enterprises actually contacted and used were essentially targets of opportunity. They were ones available and accessible to administrators in each state, consistent insofar as reasonably possible for the instructions for identifying respondents and administering the questionnaires. Generally, employees were contacted in several different cities and industries within each state.

This diversity of locations and industries, distributed across major regions of the country, was intended to approximate a reasonalbe representation of the overall work situations in which Automotive Mechanics obtain employment. While sampling of the total population of mechanics was not strictly controlled, the actual range of variations included in the survey should certainly lend assurance of the data accuracy and meaningfulness where some concensus did occur in the data.

The following outline lists the questions that employees answered in each subgrouping:

	Questions Included in Task Inventory Questionnaire, listed in sequence answered by an individual in that group
Workers	
Group 1	Q1: Task Occurrence Q3: Frequency of Performance Q8: Importance to Job
Group 2	Q6: Extent Task Is Part of the Position Q12: Learning Location
Supervisors	
Group 1	Q2: Task Occurrence Q7: Time to Qualify Q9: Importance to Job Q10: Possible to Improve Procedures
Group 2	Q2: Task Occurrence Q4: Frequency of Performance Q13: Learning Location Q11: Poorly Performed Task

Grouping of four states to respond to each question was a compromise solution for obtaining a broad representation of work settings, yet remain within the research resources of this project. Varied geographical and industry contexts were deliberately sought, rather than concentrating upon some restricted job market. The purpose of broad representation is to secure task information such that training program decisions might better assure that the trainees are effectively prepared for employment in a wide range of situations and opportunities. This is intended to enhance their capability of acquiring satisfactory employment experience wherever opportunities and circumstances happen to occur for an individual.

Such job mobility may not always be the goal of a particular training program, however. In instances where schools or colleges intend to offer specialized training programs that are targeted for particular employment situations, it might be more appropriate to sample employees within a specific type of industry or in a limited geographical area.

Except for Worker Group 2, all persons answered the questions only for those tasks each had checked on Question 1 or 2 as part of the job. This was done in attempting to reduce the response time for each person answering the questionnaires. (Note: In less extensive administrations, it would be recommended that employees provide a response on every item to reduce opportunity for recording error.) Questions 6 and 12 were to be answered for every task in the inventory by members of Worker Group 2, to permit Question 6 to be administered as if no other job-relevance questions were involved. All persons were informed that if there were any particular items they preferred not to answer, they were certainly free to omit that item.

The type and number of questions assigned to each respondent group allowed each questionnaire set to be completed in about three to four hours. This is far too lengthy for normal usage of Task Inventory Questionnaires. However, the various kinds of task data were necessary for one of the purposes of the overall research program, i.e., the identification of the fewest questions which accurately detect relevant and critical training needs.[3] Such a determination should eventually permit future questionnaires for training purposes to be much briefer. The data collected do indicate that participants were patient with the present version, and made an obvious effort to respond accurately. This cooperation and effort are highly appreciated.

---

[3]This identification is not part of the present report of the occupational survey.

Network of State Agencies Providing Local Administration of Questionnaires

In addition to the participating employers and employees, the success of this wide-scale data collection effort was due in large measure to the conscientious activities of personnel in several state agencies. It was their mission to establish local contacts to secure the cooperation and response of employers and employees. Each agency accomplished this in the manner most effective for a particular state, consistent with general guidelines regarding the types of respondents needed. They administered the Task Inventory Questionnaires on a large scale, in a civilian and community context, and in compliance with the requirements of the study for full voluntary participation by each respondent. Appendix A acknowledges the responsible participating agencies and key individuals involved. Since their participation some individuals have become associated with agencies or positions different from these citations.

Instructions to Supporting State Agencies

The instructions provided to guide data collection for this study were:

> Moderate-sized or large business operations should be sought. Service stations and small garages should be avoided. If the business is too small, the data-gathering effort becomes too time-consuming to be worthwhile, although there is no restriction against using them.
>
> At least three different employing firms should be obtained: preferably as many different employers as reasonable to get. Try not to obtain all of the same type of business firm. Generally, no more than six workers of a given job type should be sought from any one employer.
>
> Insofar as possible, try to get workers who have from two to ten years of work experience after qualifying in their job area. That is, try to avoid those with very limited or very extensive job experience. A predominance of older workers would tend to provide unrealistic job data upon which to base the training needs of new workers.
>
> Supervisors should <u>preferably</u> have four or more years of experience supervising workers of the particular type involved in this study. To the extent possible, seek persons who have had experience supervising a number of workers of this type.

For workers it was assumed that some minimal amount of job experience would be needed for them to recognize and provide useful indications of performance requirements. However, extensive experience probably leads to patterns of performance beyond those for which pre-employment training might be expected or is likely to occur the first few years on the job. Thus, competent workers with about two to ten years of experience in the occupation seemed most desirable. For supervisors, the more relevant supervisory experience the better. It is their extensive background which should permit them to make useful ratings and judgments.

Additional instructions also were provided on handout sheets for each agency. It is important that administrators of questionnaires be well informed of the type of employees desired as respondents, as well as how to handle a variety of contingencies that invariably arise. To assure this, key representatives of each agency met with the project staff at The Center for Vocational Education prior to contacting employers and workers. At this one-day session, all were informed of the directions and had an opportunity to discuss individual concerns.

The Task Inventory Computer System Programs

The Task Inventory System (TIS) computer programs were designed specifically to produce descriptive summaries of the response data for each question. They were designed in a modular fashion to permit ready applicability for processing data from other task surveys that might be conducted in the future. New questions or response formats may be accommodated as needed. The TIS is composed of three programs:

1. FILEUP - FILEUP reads raw data cards, scans for inconsistencies, checks for card sequencing errors, and builds a raw data tape file (MASTER).

2. SVCALC - SVCALC reads the MASTER file, calculates summary values for each task, and creates a summary value tape file (SVFILE).

3. TABLES - TABLES reads the SVFILE and prints desired Data Summary Tables. (Tables 1-9 of Appendix C) It does not, however, print out the task statement.

The TIS has a capacity of 500 task items per job and can be used to analyze data collected on a variety of question formats, including checkmarks for applicable tasks, interval and ordinal scales, single response options on nominal scales, and combinations of checkmarks and nominal scale options. Interval scales contain the option of including or excluding the 0 scale level in computing average responses, where 0 denotes that the respondent does not perform the task. Thus, an average can be computed for only those workers who actually have the task as part of their job.

A set of valid codes for each question is utilized by the TIS to screen the questionnaire data for errors and inconsistencies. Inconsistencies may occur when a respondent does not check a task as occurring (on Question 1 or 2), but does respond on some subsequent question. Such inconsistencies result in the insertion of an invalid code by the program for the particular task item and question combination on which the inconsistency occurs. A similar procedure is incorporated in the program to recode missing data to a missing data code. As a result of these screening devices, the program bases calculations on only those responses present within the ranges of valid codes.

The summary data for each task item may consist of:

1. Measures of central tendency or average responses (means, medians, modes).

2. Measures of response dispersion (standard deviations, quartile deviations).

3. Percentage of category use.

4. Percentage of use of a specified scale range.

5. Frequency distributions of responses on a scale, and job totals.

6. Scale differences between subgroups of respondents, such as job types within an occupational area or distinct types of respondents within one job type.

7. Number of persons responding to the question.

In the data reported in Appendix C there are 134 columns of summary information given for each task. These data are grouped into seven tables to printout related kinds of task information:

Table 1: Task Occurrence (10 columns of data)
Table 2: Task Importance (22 columns)
Table 3: Extent Task Is Part of the Job (13 columns)
Table 4: Frequency of Task Performance (27 columns)
Table 5: Time to Qualify (14 columns)
Table 6: Learning Location (26 columns)
Table 7: Supervisor Suggestions (22 columns)

Other reporting formats may be programmed to fit special requirements of new studies.

Characteristics of Respondents

Background data were gathered from workers (Automotive Mechanics) on five issues: (a) present job title, (b) type of

business in which employed, (c) primary source of training for the job, (d) years of experience in present job, and (e) years of experience in the occupational field. Supervisors provided background data on: (a) present job title and (b) type of business. Four additional pieces of background information were to be provided by the state agencies supporting this study: (a) specific type of business operation, (b) relative size of business, (c) relative city size, and (d) time required to complete each questionnaire. A summary of available background data for Automotive Mechanics is provided in Appendix B.[4]

It can be noted in Table B-1 that mechanics with job titles of Automotive Mechanic, Automobile Repairman, or Garage Mechanic accounted for 72% of the workers responding to the questionnaire.[5] Additional titles written in by workers included such job labels as Light Truck Mechanic, Transmission Specialist, Automotive and Truck Mechanic, Automotive and Equipment Mechanic, and Certified General Auto Mechanic. Many of the mechanics reported more than one job title. These tended to be Automotive Mechanic in combination with Engine Repair Mechanic, Truck Mechanics, Automotive Repair Specialist, or other added title.

Seventy-two percent of the supervisors gave one of the following as their job title: Service Manager, Service Advisor or Writer, Garage Owner, or Repair Shop Manager (Table B-1). Supervisors also provided a number of write-in job titles, including Shop Foreman, Working Foreman, Motor Vehicle Foreman, Motorized Equipment Manager.

With respect to the type of business in which employed (Table B-2), transportation was the most frequent category selected by both mechanics and supervisors (27% and 26%, respectively). Equipment servicing ranked second in frequency of selection of both groups (workers 12% and supervisors 10%). About 20% more were distributed across nine of the remaining 16 listed business options. However, numerous write-in statements of both mechanics and supervisors did include such business variations as automotive repair shop - new car agency, automobile sales and service, motor vehicle department,

---

[4]The background data were collected for the research purposes of this study only and do not necessarily meet the needs of other job analysis studies, such as those specified by the draft guidelines of the Equal Employment Opportunity Coordinating Council (1974) for employment test validation, or those cited in the APA/AERA/NCME (1974) standards for reporting the sample and conditions influencing test validity studies. Agencies desiring to adapt these data categories or this methodology to local conditions are cautioned of the need to collect background information in conformance with appropriate requirements.

[5]All background percentages are based on the total number of workers or supervisors in the sample.

independent garage, new car dealer, auto repair, automotive dealership, garage, automobile agency, auto service sales, fleet operation, dealer repair shop, automotive, auto repairs, and mechanical maintenance. The predominant write-in was some variation of auto dealership. Multiple responses marked by both workers and supervisors tended to include equipment servicing, transportation, and other. Apparently employees in this occupational area do not associate themselves with general kinds of industry, but prefer to describe the specific type of business in which they work.

Mechanics, for the most part, received their training to qualify for the occupation (Table B-3) through self-learning on the job (33%); in technical institutes or colleges (15%); or in private business, trade, or technical school (8%). These figures are not fully representative of the primary training source for mechanics, as many respondents (over 20%) marked more than one training category. Multiple responses were not tallied in this study, though they tended to be self-learned on the job and employer training programs, along with a wide array across 10 of the other sources of training, especially armed services technical school.

The mechanics varied in the number of years of job experience in their present jobs from less than one year to 36 years, the average being 5.7 years (Table B-4). Total years of individual experience in the automotive repair occupational field ranged from one year to 36 years. The average number of years of related occupational experience was 11.4 years.

Classifications by state agencies, though far from being fully available, did provide some indication that the specific types of business operations included in the survey were predominately new and/or used car dealerships. This represents 37% of the total sample of worker and supervisor respondents, and 66% of those reported by the state agencies. Respondents were drawn primarily from moderate-sized business operations (56% of those reported), with some 34% representation from large operations. City size classifications indicate that the largest percentage of respondents (86%) were drawn from reasonably large metropolitan areas as opposed to moderate-sized or smaller cities remote from a large metropolitan area. These data are reported in Table B-5.

RESULTS

The survey results are presented in two forms. First, the survey data on task relevance are presented in highly summarized and abbreviated form in Table 1. Second, a detailed presentation of all survey task data is provided in Appendix C for those readers wishing to use specific data values. Necessary interpretative information for Table 1 is presented just prior to the set of tabled data. Task statements are located with Table 1 and in

Appendix D. Since Question 2 was administered to both groups of supervisors, summaries of supervisor judgments on task occurrance represent a composite of both groups.

Review of the completed questionnaires prior to keypunching of the data caused the rejection of returns from nine workers and 20 supervisors. Such rejections were based on major obvious failures of respondents to follow the questionnaire directions. Most of the 20 supervisors were rejected because they rated the job of supervisor instead of the workers' job. A few appeared not to have understood the rating procedure at all, with highly inconsistent and incomplete responses. In one instance a supervisor had five of his workers all give identical responses on worker questionnaires.

An additional 11 worker questionnaires were also not used, to reduce the analysis to the intended 60 workers for each of the two administration groups. These selections were made by eliminating the less complete and less accurate questionnaires, such as evidenced by (a) the background sheet indicating a possibly inappropriate job title (usually a specialist limited to one aspect of repair work, such as air conditioning or electrical) and substantiated by the task response pattern, (b) using many multiple responses to task questions (which were not usable by the computer routine), (c) answering nearly all tasks without a pattern of item discrimination, or (d) not answering some of the task questions at all. Since this study was not investigating the merits of the task inventory questionnaire method itself, but rather trying to establish a useful data base for making training selections, questionnaires which tended to detract from the validity of that data base were eliminated. However, this was only possible within the constraints of retaining returns from 60 workers per group.

No such reduction was possible for supervisors since neither group had sufficient usable questionnaires. With an intended 40 supervisors per group, there were available only 35 supervisors in Group 1 and 39 supervisors in Group 2. It was not feasible to continue data collection efforts to complete these two groups, and the data summaries for supervisors contain fewer supervisor respondents.

On the average, each mechanic in Group 1 marked 212 tasks on Question 1 as performed by them. Group 2 mechanics each indicated an average of 208 tasks rated as part of their job, at a level of 2 or higher on Question 6. Supervisors in Group 1 marked an average of 267 tasks to be performed by their mechanics; with 270 tasks marked by the second group of supervisors on Question 2. These figures compare with 321 potentially relevant tasks of Automotive Mechanics, after omitting 59 of the 380 listed tasks as not being a part of the occupation for training purposes (see next section). Apparently, a person in any one mechanic position

performs about 65% of the tasks that might be relevant across the entire occupation.

In Table 1 and in Appendix D the tasks are organized within 17 arbitrary duty areas, as on the original questionnaires. The duty labels are merely a convenience for providing some functional structure to the entire listing of potential job tasks, intended to provide some work context in which to interpret the task statements.

These duty labels unfortunately resulted in some misunderstanding. A few raters omitted whole duty listings, apparently because the duty label itself did not seem appropriate for them, without checking whether individual tasks within a listing might be relevant. For instance, Duties A, B, C, D, and E all implied supervisory and managerial functions. Occasionally, if some worker did not feel any supervisory duties were performed, these sections might be skipped altogether without reading the task statements.

Since the duty categories were established arbitrarily in the first place, it would be our recommendation for future questionnaires that duties not be based on functions that might be construed as limited to particular types of employees in an occupational field. Another recommendation would be to move some highly relevant tasks up near the beginning of the task listing in Task Inventory Questionnaires, instead of starting off with more than 100 supervisory-oriented tasks. This would give workers a clearer idea that the task list pertains to them, and may help prevent some supervisors from thinking erroneously that they are to be rating their own job as supervisor instead of the workers' job. Additionally, task statements should be meaningful alone, without the context of a duty category being needed to clarify the task activity.

Abbreviated Summary of Task Relevance Data

Table 1 includes those task questions that suggest the extent to which each task is relevant to the job of Automotive Mechanics. To eliminate obviously questionable information, two editing operations were applied to the data prior to preparing the summary.

The original task listing contained 380 task statements. With the data from this survey, 59 tasks were identified as of low relevance and apparently not a part of the job of Automotive Mechanic. A task was considered irrelevant and excluded from the data summary when less than 10% of the Automotive Mechanics indicated that they performed it or less than 10% of the supervisors indicated that Automotive Mechanics should perform the task. The tables in Appendix C contain information about these 59 omitted tasks, and Appendix D contains the identifying statement for each such task. The remaining 321 of the 380 listed tasks are presented in the summary table.

A second set of items, involving specific summary data, were removed when either the distribution of responses to a question was very scattered, or very few people responded to a question. These occurrences render any summary statistic very unstable. Because the tasks omitted were determined very conservatively, some of the summary items included may be sufficiently unstable to merit further study. The specific basis for deleting a summary item is described in the next section.

Interpretation Guide for Table 1

Table 1 contains the data summaries pertaining to varying degrees of job relevance for 321 tasks of Automotive Mechanics. Task numbers in Table 1 are the same as the original numbers assigned in the Task Inventory Questionnaires.

It should be kept in mind, while examining these task data, that tasks may vary in the extent to which they are part of the overall job of Automotive Mechanics. Some are only peripheral work activities, more relevant to other related occupations within the overall field of automotive repair. Their degree of relevance or job importance are not necessarily an index of their need for pre-employment training.

The summary data are reported through the use of percentages, averages (means), and summary labels. Percentages are used to report responses to Questions 1, 2, and 6. Averages are used for responses to Questions 6, 8, and 9. For Questions 8 and 9 these averages reflect only those answers given by individuals who identified a task as part of the job (per Questions 1 or 2). Averages for Question 6 include responses that the task is not a part of the job (scale level 0), with an additional summary column to show what percentage of mechanics rated each task as at least a "substantial" part of their job (i.e., used scale levels 4, 5, 6, or 7). Abbreviated frequency statements are used to label summary (median) responses[6] to Questions 3 and 4.

[6]Summary labels were assigned on the basis of median response averages on the seven-point scale which was used to rate frequency of performance. The method used for converting median values to summary labels is shown below:

"Frequency" Scale Category	Range of Median Values	Summary Labels for Medians in the Range
Have done, but don't normally do	1.0 - 1.5	Possible
Less than once a year	1.6 - 2.5	Seldom
Once a year	2.6 - 3.5	Yearly
Once a month	3.6 - 4.5	Monthly
Once a week	4.6 - 5.5	Weekly
Once a day	5.6 - 6.5	Daily
Several times each work day	6.6 - 7.0	Daily +

Data reported in the first four columns of Table 1 (Questions 1, 2, and 6) include all responses. Data reported in the last four columns (Question 8, 9, 3, and 4) omit any item which: (a) has been answered by fewer than 10% of the workers or supervisors in a group, or (b) had a distribution of responses which was so widely scattered as to make an average completely meaningless.[7] An item of task information which has been omitted is denoted in the table by a dash (-) entry.

To facilitate the interpretation of Table 1, the response scales for Questions 3, 4, 6, 8, and 9 are repeated here to provide the reader a quick reference while examining the data. Number values in front of each scale category were those assigned for computing averages, and correspond to summary values reported in Table 1.

Question 3 (Workers) and 4 (Supervisors): Frequency of Performance

1 = Have done, but don't normally do.
2 = Less than once a year.
3 = Once a year.
4 = Once a month.
5 = Once a week.
6 = Once a day.
7 = Several times each work day.

} on the average, over the last several months

[7]Cutoff points for deletion of scattered responses were determined on the basis of the number of responses and the number of intervals on the answer scales. Questions 8 and 9 were edited through the use of cutoff points based on standard deviations. Responses to these questions were deleted when their standard deviations were greater than 0.85 and 0.93, respectively. These cutoff values were considered quite conservative, eliminating only the most obviously unstable data.

Questions 3 and 4 were edited through the use of the quartile deviation (half of the number of scale units over which the middle 50% of answers occur). Labels were deleted when these quartile deviations were greater than 1.75 and 1.84 for Questions 3 and 4, respectively.

Providing the basis for these values was a section in Downie and Heath (1959, pp. 47-51) on the interpretation of standard deviations (s) and their relation to range of interval scales. Conversion to quartile deviations (Q) was based on the constant relationship between Q and s for normally distributed data, $Q = .6745\ s$.

Question 6 (Workers): Extent Task Is Part of the Position

0 = Definitely not a part of my job.
1 = Under unusual circumstances may be a minor part of my job.
2 = (Not defined)
3 = (Not defined)
4 = A substantial part of my job.
5 = (Not defined)
6 = (Not defined)
7 = A most significant part of my job.

Question 8 (Workers) and 9 (Supervisors): Task Importance to Job

1 = Low importance (relatively unimportant part of the job).
2 = Moderate importance (important but not essential).
3 = High importance (essential part of the job that decisively influences the effectiveness of the shop or garage operations).

Table 1

Summaries of Task Relevance Data

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers 1%	Percent Who Now Do Each: Desired by Supervisors 2%	Extent Tasks Are Part of The Job: Average Rating by Workers 6	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job 6%	Relative Importance of Tasks to Job: Average Rating by Workers Doing It 8	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done 9	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task 3	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done 4
DUTY A: ORGANIZING AND PLANNING									
1.	Conduct personnel meetings.	12	22	.2	0	2.1	2.3	Yearly	Monthly
3.	Develop troubleshooting procedures for use in locating vehicle malfunctions.	33	68	1.8	27	2.5	2.8	Weekly	Monthly
4.	Develop plans for performing maintenance.	20	51	1.1	19	2.5	2.6	-	-
6.	Establish equipment or special tool requirements.	25	49	1.2	19	2.4	2.4	Yearly	Yearly
7.	Establish shop inspection system.	10	27	.6	5	-	2.3	Weekly	Weekly
10.	Establish methods to improve maintenance procedures.	20	36	1.2	17	2.5	2.3	Monthly	Monthly
11.	Establish operational procedures.	10	23	.9	10	-	2.4	-	Weekly

13.	Establish stock level of supplies.	13	30	.5	3	2.5	2.2	Weekly	Weekly
14.	Inspect vehicles for compliances with local laws.	53	72	3.5	58	2.6	2.9	Daily	Daily
15.	Participate in personnel meetings.	43	66	2.2	32	2.2	2.5	Monthly	Monthly
17.	Plan emergency procedures for use during unusual maintenance loads.	12	27	.5	7	2.1	2.1	Monthly	Monthly
18.	Plan shop safety programs.	17	39	.7	5	2.7	2.6	Monthly	Monthly
22.	Schedule appointments.	12	35	.6	7	2.7	2.0	Daily +	Daily +
DUTY B: SUPERVISING									
27.	Complete work order form.	30	54	1.0	9	2.4	2.7	Daily +	Daily +
28.	Conduct safety briefings.	12	24	.3	3	2.6	2.3	Monthly	Monthly
29.	Control flow of work.	12	45	.6	3	3.0	2.4	-	Daily +
32.	Evaluate vehicle maintenance for compliance with warranty policies.	13	38	1.1	15	2.6	2.3	Monthly	Daily +
33.	Keep manuals and special bulletins up to date.	18	46	1.5	20	2.6	2.6	Monthly	Weekly
40.	Orient newly hired personnel.	27	60	1.1	12	2.3	2.3	Yearly	-
41.	Prepare requests for shop maintenance.	13	45	.7	8	2.3	2.1	Seldom	Monthly
42.	Prepare requisitions for equipment.	17	23	.8	7	2.0	1.8	Yearly	Weekly
43.	Resolve personnel problems.	10	46	.4	2	-	1.7	-	Weekly
44.	Resolve technical problems.	30	62	2.2	32	2.6	2.8	Weekly	Daily
46.	Schedule work assignments.	12	40	.6	7	2.5	2.3	Monthly	Daily +

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers 1%	Percent Who Now Do Each: Desired by Supervisors 2%	Extent Tasks Are Part of The Job: Average Rating by Workers 6	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job 6%	Relative Importance of Tasks to Job: Average Rating by Workers Doing It 8	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done 9	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task 3	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done 4
49. Supervise general mechanics.		15	42	.4	5	2.2	2.5	Daily	Daily +
DUTY C: EVALUATING AND INSPECTING									
52. Analyze causes of vehicle failures.		77	82	4.5	77	2.7	2.9	Daily +	Daily +
53. Analyze maintenance reports on vehicles.		25	42	1.9	30	2.7	2.3	Weekly	Daily +
54. Conduct spot checks on malfunctions.		55	55	2.8	43	2.5	2.5	Daily +	Daily
56. Direct quality checks of vehicles after maintenance.		30	46	1.4	15	2.8	2.6	Daily +	Daily +
57. Estimate cost of vehicle repairs.		43	51	1.5	17	2.3	2.6	Daily	Daily +
60. Evaluate suggestions.		13	45	.7	7	2.4	2.3	-	Daily
63. Inspect maintenance procedures.		13	40	.8	10	2.4	2.3	Daily	Weekly

64.	Inspect vehicles sold by organization.	40	58	2.5	40	2.4	2.5	Weekly	Daily
65.	Inspect vehicles received by organization.	32	53	2.0	27	2.5	2.5	Weekly	Weekly
66.	Inspect vehicles and apply materials for corrosion and rust control.	35	34	1.2	13	2.0	1.6	Weekly	Monthly
67.	Inspect and test windshield-wiper motors, blades and arms.	82	84	4.4	73	2.3	2.5	Weekly	Daily
68.	Inspect tires and wheels.	82	85	4.3	73	2.4	2.5	Daily	Daily +
69.	Inspect vehicles for mirrors.	60	76	3.4	55	2.1	2.1	Daily	Daily
71.	Prepare inspection reports.	20	45	1.7	20	2.3	2.6	Monthly	Daily
72.	Perform inspection of vehicle conditions.	68	78	4.3	77	2.6	2.7	Daily	Daily +
DUTY D:	TRAINING								
74.	Brief personnel on changes in methods and procedures.	18	36	.8	3	2.1	2.2	Monthly	Weekly
75.	Counsel individuals on changes in methods and procedures.	12	34	.9	7	2.3	2.3	-	Weekly
78.	Demonstrate operation of equipment.	40	60	2.1	25	2.1	2.2	Monthly	Monthly
89.	Train individuals on the job.	33	53	1.7	18	2.1	2.4	Yearly	Weekly
DUTY E:	PERFORMING MAINTENANCE CONTROL FUNCTIONS								
90.	Annotate and process records on vehicles being serviced and repaired.	18	46	1.1	12	2.8	2.3	-	Daily +

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers 1%	Percent Who Now Do Each: Desired by Supervisors 2%	Extent Tasks Are Part of The Job: Average Rating by Workers 6	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job 6%	Relative Importance of Tasks to Job: Average Rating by Workers Doing It 8	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done 9	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task 3	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done 4
91.	Complete forms when servicing vehicles.	52	68	2.4	32	2.5	2.6	Daily +	Daily +
92.	Complete labor time cards.	18	43	1.8	20	2.3	2.1	Daily	Daily
93.	Complete requests for procurement of parts.	27	51	1.9	25	2.3	2.1	Daily +	Daily
96.	Determine actual cost of vehicle repairs.	23	32	1.2	15	2.7	2.8	Daily	Daily +
97.	Enter work performed on work orders.	62	70	3.0	45	2.7	2.8	Daily +	Daily +
100.	Initiate and complete work orders.	33	50	1.5	19	2.8	2.6	Daily +	Daily +
101.	Initiate request for parts.	58	68	3.2	51	2.4	2.3	Daily +	Daily
102.	Inspect lubrication and service guide.	30	50	1.7	25	2.2	2.5	Monthly	Daily +

106.	Maintain vehicle warranty records.	10	27	.3	3	2.5	2.0	Yearly	Daily
107.	Monitor workload and downtime of vehicles in shop for repairs.	10	32	.4	3	2.7	2.3	-	Daily
108.	Plan, schedule, and control maintenance of vehicles.	12	27	.7	7	2.9	2.1	Daily	Daily
110.	Prepare reports of vehicle defects.	18	39	2.1	29	2.9	2.4	Daily	Daily +
116.	Verify and complete operator's inspection guide and trouble report.	10	16	1.3	14	-	2.3	Daily	Daily
DUTY F:	PERFORMING ENGINE OVERHAUL ACTIVITIES								
117.	Adjust valves.	92	100	4.3	66	2.6	2.8	Weekly	Weekly
118.	Clean engines.	75	92	3.3	50	1.7	2.0	Monthly	Weekly
119.	Clean engine parts and check for condition.	85	99	4.7	80	2.5	2.9	Weekly	Daily
120.	Diagnose valve train and head malfunctions.	88	96	4.5	68	2.5	2.9	Monthly	Weekly
121.	Disassemble engines.	87	96	4.2	67	2.4	2.6	Monthly	Monthly
122.	Fit piston pins.	58	77	2.9	44	2.6	2.7	Monthly	Monthly
123.	Grind valves.	75	93	3.9	56	2.5	3.0	Monthly	Monthly
124.	Inspect and correct bearing fit.	73	93	3.8	58	2.7	2.8	Monthly	Monthly
125.	Inspect exhaust systems.	88	100	5.0	86	2.3	2.7	Weekly	Daily
126.	Inspect head for warp.	77	89	3.8	53	2.5	2.9	Monthly	Monthly
127.	Inspect or replace exhaust manifolds.	87	99	4.4	71	2.2	2.6	Monthly	Weekly

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers	Percent Who Now Do Each: Desired by Supervisors	Extent Tasks Are Part of The Job: Average Rating by Workers	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job	Relative Importance of Tasks to Job: Average Rating by Workers Doing It	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done
		1%	2%	6	6%	8	9	3	4
128.	Inspect crankshaft and connecting rod assembly using micrometers and other equipment.	73	89	3.6	55	2.5	2.9	Monthly	Monthly
129.	Machine valve guides for special seals.	35	55	1.8	21	2.2	2.6	Yearly	Yearly
130.	Perform cylinder balance test.	78	78	3.5	53	2.5	2.8	Weekly	Weekly
131.	Perform cylinder leakage test.	80	88	4.1	66	2.5	2.8	Monthly	Weekly
132.	Perform operational inspections of positive crankcase ventilation systems.	90	97	4.4	70	2.3	2.7	Daily	Daily
133.	Perform operational inspections of engine lubrication systems.	67	93	3.8	58	2.4	2.8	Weekly	Weekly
134.	Rebuild cam followers.	18	30	.9	12	2.3	2.1	Monthly	Yearly

135.	Rebuild rocker boxes.	22	38	1.4	18	2.3	2.4	Yearly	Monthly
136.	Remove engines from vehicles.	82	97	4.3	73	2.1	2.3	Monthly	Monthly
137.	Repair oil pumps.	63	77	2.8	38	2.3	2.3	Yearly	Monthly
138.	Replace connecting rods and bearings.	78	93	3.8	62	2.7	2.7	Monthly	Monthly
139.	Replace crankshaft and bearings.	77	93	3.8	58	2.7	2.8	Monthly	Monthly
140.	Replace engine mounts.	90	99	4.5	75	2.2	2.3	Monthly	Monthly
141.	Replace flywheel.	82	96	4.0	62	2.3	2.5	Yearly	Monthly
142.	Replace flywheel ring gears.	73	84	2.7	42	2.4	2.6	Yearly	Yearly
143.	Replace gaskets and seals.	88	100	5.0	85	2.6	2.8	Weekly	Daily
144.	Replace head gaskets.	85	95	4.2	68	2.6	2.8	Monthly	Monthly
145.	Replace muffler.	87	100	4.7	80	2.2	2.5	Weekly	Daily
146.	Replace oil pumps.	82	93	4.2	65	2.5	2.8	Monthly	Monthly
147.	Replace pan and valve covers.	85	96	4.4	68	2.2	2.4	Monthly	Monthly
148.	Replace pistons.	77	93	3.8	58	2.6	2.8	Yearly	Yearly
149.	Replace rings on pistons.	75	90	4.0	63	2.7	2.8	Monthly	Monthly
150.	Replace tail pipe assemblies.	87	100	4.6	78	2.1	2.3	Weekly	Daily
151.	Replace timing gears and chains.	82	95	4.1	60	2.6	2.8	Monthly	Monthly
152.	Replace valves.	78	93	3.8	57	2.6	2.9	Monthly	Monthly
153.	Replace valve guides.	55	66	2.4	33	2.4	2.6	Yearly	Monthly
154.	Replace valve seats.	38	46	1.4	13	2.7	2.5	Seldom	Yearly

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers 1%	Percent Who Now Do Each: Desired by Supervisors 2%	Extent Tasks Are Part of The Job: Average Rating by Workers 6	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job 6%	Relative Importance of Tasks to Job: Average Rating by Workers Doing It 8	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done 9	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task 3	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done 4
155.	Repair or service crankcase ventilation systems.	92	99	4.4	65	2.3	2.6	Weekly	Daily
156.	Replace valve lifters.	83	96	3.6	57	2.4	2.8	Monthly	Monthly
157.	Resurface valve seats.	70	90	4.0	58	2.6	2.9	Monthly	Monthly
158.	Replace camshaft.	75	93	3.5	50	2.6	2.7	Yearly	Yearly
159.	Replace camshaft bearings.	65	82	2.5	33	2.6	2.7	Yearly	Yearly
160.	Run compression test.	92	100	5.3	85	2.5	2.8	Weekly	Daily
161.	Weld small holes and cracks in blocks.	18	20	.4	3	2.1	2.0	Possible	Possible

DUTY G: MAINTAINING AND REPAIRING POWER TRAINS

162. Adjust external shift linkage on manual transmissions.	93	99	4.0	62	2.3	2.5	Monthly	Monthly
163. Adjust mechanical-type clutch.	93	99	4.4	68	2.4	2.7	Weekly	Weekly
164. Analyze and repair electrical control circuit and components for overdrive unit.	57	62	1.7	20	2.1	2.2	Seldom	Seldom
165. Balance drive shaft (in-car).	27	31	.9	12	2.0	2.0	Yearly	Yearly
166. Inspect shifting.	90	96	4.2	70	2.3	2.4	Weekly	Daily
167. Inspect and repair four-wheel drive locking hubs.	57	68	1.6	22	2.3	2.3	Yearly	Yearly
168. Inspect drive shafts, u-joints, and center bearings.	92	97	4.2	68	2.4	2.7	Weekly	Daily
169. Lubricate speedometer cable, drive gear, and housing.	92	99	4.0	65	2.1	2.2	Monthly	Weekly
170. Lubricate universal joints.	88	97	3.2	47	2.2	2.3	Monthly	Weekly
171. Perform operational inspections of differentials.	83	92	3.6	58	2.4	2.6	Monthly	Weekly
172. Perform operational inspection of four-wheel drive mechanisms.	55	68	1.6	23	2.2	2.4	Monthly	Yearly
173. Perform operational manual transmission inspections.	83	96	3.6	58	2.4	2.7	Monthly	Weekly
174. Rebuild overdrive unit.	37	50	1.3	15	2.0	2.4	Seldom	Seldom

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers 1%	Percent Who Now Do Each: Desired by Supervisors 2%	Extent Tasks Are Part of The Job: Average Rating by Workers 6	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job 6%	Relative Importance of Tasks to Job: Average Rating by Workers Doing It 8	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done 9	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task 3	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done 4
175.	Rebuild manual transmission (major repairs).	73	95	3.1	47	2.5	2.6	Yearly	Yearly
176.	Repair hydraulic-type clutch.	62	78	2.6	39	2.5	2.7	Yearly	Yearly
177.	Repair or replace differentials.	85	93	3.3	52	2.6	2.8	Monthly	Monthly
178.	Repair or replace spider gear.	80	89	3.0	47	2.5	2.7	Monthly	Monthly
179.	Repair or replace slip joints or universal joints.	88	97	3.5	57	2.5	2.5	Monthly	Weekly
180.	Repair, replace, or adjust front-drive axle assemblies.	58	73	2.2	32	2.5	2.6	Yearly	Yearly
181.	Replace mechanical-type clutch.	87	97	4.3	66	2.4	2.7	Monthly	Monthly
182.	Replace drive line seals.	83	97	4.0	63	2.5	2.6	Monthly	Monthly
183.	Replace a manual transmission.	82	99	3.5	57	2.4	2.6	Yearly	Yearly

184.	Replace manual transmission gaskets and seals (in-car repairs).	83	97	3.3	52	2.4	2.6	Monthly	Monthly
185.	Replace pinion seal.	88	95	3.5	53	2.4	2.7	Monthly	Monthly
186.	Replace pilot bearings.	85	95	3.2	48	2.3	2.6	Yearly	Yearly
187.	Replace rear-axle shaft, bearings and seal.	88	99	4.2	70	2.5	2.7	Monthly	Monthly
188.	Replace speedometer cable, drive gear, and housing.	90	99	4.1	65	2.1	2.2	Monthly	Monthly
189,	Replace throw-out bearings.	88	97	3.9	58	2.4	2.6	Monthly	Monthly
190.	Replace transmission mounts.	88	99	3.7	62	2.1	2.3	Yearly	Monthly
191.	Road test inspections of differentials.	87	95	3.8	58	2.5	2.7	Monthly	Weekly
193.	Straighten rear housing to correct excessive tire wear.	12	24	1.1	13	2.2	2.0	Seldom	Possible
194.	Test and replace out-of-round shaft.	60	76	2.3	35	2.3	2.4	Yearly	Yearly
DUTY H:	MAINTAINING AND REPAIRING AUTOMATIC TRANSMISSIONS								
195.	Adjust floor shift linkage.	80	86	3.6	57	2.3	2.4	Monthly	Monthly
196.	Adjust linkage from steering column to automatic transmission.	85	89	3.6	53	2.4	2.6	Monthly	Monthly
197.	Adjust linkage from engine to automatic transmission.	87	95	3.6	56	2.3	2.6	Monthly	Monthly
198.	Clean and visually inspect transmission.	78	90	3.5	55	2.2	2.6	Monthly	Monthly

Table 1 - Continued

Tasks of Automotive Mechanics — TIQ Question:	Percent Who Now Do Each: Actual, by Workers	Percent Who Now Do Each: Desired by Supervisors	Extent Tasks Are Part of The Job: Average Rating by Workers	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job	Relative Importance of Tasks to Job: Average Rating by Workers Doing It	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done
TIQ Question:	1%	2%	6	6%	8	9	3	4
199. Diagnose, replace or adjust modulators.	72	89	3.6	57	2.4	2.8	Monthly	Monthly
200. Inspect and repair transmission cooling system.	70	84	3.0	47	2.4	2.6	Monthly	Monthly
201. Inspect and repair converter.	47	53	2.3	35	2.6	2.6	Yearly	Monthly
202. Inspect and repair front pump and components.	55	85	3.1	53	2.5	2.8	Yearly	Monthly
203. Install automatic transmission coolers.	63	82	2.2	32	2.0	2.3	Yearly	Yearly
204. Make external adjustment of bands on automatic transmissions.	73	90	3.0	45	2.4	2.7	Monthly	Monthly
205. Make internal repairs and adjustments on automatic transmissions.	58	85	3.2	53	2.7	2.9	Monthly	Monthly

206.	Perform operational automatic transmission inspections.	73	89	3.9	63	2.5	2.8	Monthly	Weekly
207.	Remove and install automatic transmission.	72	90	3.7	62	2.4	2.4	Monthly	Monthly
208.	Replace external seals, gaskets, and lines on automatic transmissions.	75	90	3.8	62	2.4	2.6	Monthly	Monthly
209.	Replace or adjust neutral switch.	85	97	4.0	67	2.3	2.7	Monthly	Monthly
210.	Service automatic transmission.	78	95	4.1	65	2.4	2.7	Monthly	Weekly
211.	Service filter and check transmission cooling system.	77	90	4.0	65	2.3	2.6	Monthly	Weekly
	DUTY I: MAINTAINING AND REPAIRING ELECTRICAL SYSTEMS								
212.	Adjust headlights.	95	95	4.3	71	2.2	2.7	Weekly	Weekly
213.	Adjust, repair, or replace backup light switches.	93	97	4.2	72	2.2	2.4	Monthly	Monthly
214.	Anayze cause of electrical fires.	83	90	3.4	48	2.4	2.6	Yearly	Monthly
215.	Analyze or adjust engine performance using engine analyzer.	90	97	4.6	75	2.7	3.0	Daily	Daily +
216.	Analyze malfunctions in the cranking system.	93	99	4.8	82	2.6	2.9	Weekly	Daily
217.	Clean, gap, and test spark plugs.	95	97	4.8	78	2.3	2.6	Daily	Daily +
218.	Evaluate alternator, generator and regulator output.	92	97	5.0	83	2.7	3.0	Daily	Daily +

Table 1 - Continued

Tasks of Automotive Mechanics	Percent Who Now Do Each: Actual, by Workers	Percent Who Now Do Each: Desired by Supervisors	Extent Tasks Are Part of The Job: Average Rating by Workers	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job	Relative Importance of Tasks to Job: Average Rating by Workers Doing It	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done
TIQ Question:	1%	2%	6	6%	8	9	3	4
219. Inspect secondary circuit leads, plug wires, distributor cap, and rotor.	93	97	5.2	85	2.6	2.9	Daily	Daily +
220. Inspect and repair ignition switch, resistor, wiring, coil points, and condenser of the primary circuit.	93	97	5.1	85	2.7	3.0	Daily	Daily +
221. Locate and repair shorts and open circuits in wiring.	95	97	4.9	82	2.8	3.0	Weekly	Daily
222. Measure resistance in plug wires.	82	96	4.4	70	2.3	2.8	Daily	Weekly
223. Perform operational inspections of electrical systems.	92	99	4.8	78	2.6	2.9	Daily	Daily
224. Perform operational inspections of lighting systems.	93	96	4.8	77	2.6	2.8	Daily	Daily

225.	Repair or replace charging system regulators.	95	99	4.7	82	2.6	2.8	Weekly	Weekly
226.	Repair distributors.	90	97	4.3	70	2.5	2.8	Weekly	Weekly
227.	Repair generators or alternators.	80	92	4.5	75	2.6	2.8	Weekly	Weekly
228.	Repair or replace fuse block assembly.	90	93	3.6	57	2.3	2.3	Yearly	Monthly
229.	Repair or replace lighting system components.	97	96	4.6	73	2.4	2.6	Weekly	Weekly
230.	Repair or replace switches.	97	99	4.8	78	2.4	2.6	Weekly	Weekly
231.	Repair solenoids.	77	85	3.7	57	2.2	2.5	Monthly	Weekly
232.	Repair starters.	87	96	4.5	73	2.4	2.5	Monthly	Weekly
233.	Repair windshield wiper mechanisms or controls.	93	95	4.5	75	2.4	2.6	Monthly	Weekly
234.	Replace and adjust distributors.	95	97	4.4	73	2.5	2.8	Weekly	Monthly
235.	Replace chassis and under-hood wiring.	93	95	3.5	48	2.3	2.4	Yearly	Yearly
236.	Replace flasher units.	97	97	4.6	78	2.1	2.3	Weekly	Weekly
237.	Replace generators or alternators.	95	99	4.3	73	2.3	2.6	Monthly	Monthly
238.	Replace light bulbs.	97	97	4.8	80	2.1	2.3	Weekly	Daily
239.	Replace starters.	95	99	4.4	77	2.3	2.6	Monthly	Monthly
240.	Replace stop-light switch.	95	97	4.5	72	2.2	2.5	Monthly	Monthly
241.	Replace turn signal switches	93	97	4.7	75	2.5	2.8	Monthly	Monthly

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers 1%	Percent Who Now Do Each: Desired by Supervisors 2%	Extent Tasks Are Part of The Job: Average Rating by Workers 6	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job 6%	Relative Importance of Tasks to Job: Average Rating by Workers Doing It 8	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done 9	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task 3	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done 4
242.	Service or replace batteries, cables, and battery boxes.	95	99	4.9	80	2.3	2.5	Weekly	Daily
243.	Service the generator.	88	92	4.3	67	2.4	2.7	Monthly	Monthly
244.	Set ignition timing.	95	99	5.3	87	2.6	2.8	Daily	Daily +
245.	Test and repair automatic alarm systems of safety items.	73	78	3.2	50	2.1	2.3	Monthly	Monthly
246.	Test and repair cruise control units.	62	68	2.4	33	2.3	2.5	Monthly	Monthly
247.	Test and repair turn-signal units.	95	96	4.3	65	2.4	2.6	Weekly	Weekly
248.	Test and rewire dash units.	88	90	3.5	53	2.3	2.4	Monthly	Monthly

DUTY J: MAINTAINING AND REPAIRING FUEL SYSTEMS

249.	Adjust carburetor.	95	99	5.1	85	2.7	2.8	Daily	Daily +
250.	Adjust governors.	40	62	2.5	36	2.3	2.5	Yearly	Yearly
251.	Analyze for moisture or foreign particle level in fuel system.	83	85	4.0	63	2.4	2.5	Weekly	Weekly
252.	Analyze fuel injection problems by means of electrical diagnostic equipment.	23	38	1.7	27	2.6	3.0	-	-
253.	Clean carburetor.	92	96	4.6	82	2.5	2.8	Weekly	Weekly
254.	Clean or replace fuel filter units.	93	99	4.8	82	2.3	2.4	Weekly	Daily
255.	Inspect, clean and adjust choke unit (automatic and manual).	95	99	4.7	80	2.6	2.9	Weekly	Daily
256.	Inspect, service, or replace carburetor air cleaner.	95	99	5.0	83	2.2	2.4	Daily	Daily
257.	Inspect, service or replace gas tank, cap and sending unit.	93	99	4.6	73	2.1	2.3	Monthly	Weekly
258.	Install carburetors.	93	97	4.1	72	2.3	2.7	Monthly	Monthly
259.	Measure fuel flow and pressure.	85	90	3.9	65	2.3	2.5	Weekly	Monthly
260.	Perform operational checks of governors.	40	65	2.7	42	2.3	2.3	Yearly	Yearly
261.	Perform operational inspections of exhaust emission control system.	83	96	3.9	67	2.4	2.8	Daily	Daily
262.	Perform operational inspections of fuel systems.	90	96	4.2	72	2.4	2.7	Weekly	Daily

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers	Percent Who Now Do Each: Desired by Supervisors	Extent Tasks Are Part of The Job: Average Rating by Workers	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job	Relative Importance of Tasks to Job: Average Rating by Workers Doing It	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done
		1%	2%	6	6%	8	9	3	4
263.	Remove, service or replace fuel pumps.	93	97	4.5	75	2.3	2.5	Monthly	Monthly
264.	Repair governors.	25	53	2.0	27	2.3	2.3	Seldom	Yearly
265.	Repair or replace electrical fuel injection computer.	13	38	1.3	15	2.9	2.6	Possible	Seldom
266.	Repair or replace fuel injectors.	35	46	1.9	27	2.7	2.3	Yearly	Yearly
267.	Repair or replace fuel injector pumps.	22	45	1.7	22	2.8	2.2	Seldom	Seldom
268.	Repair or replace fuel lines and hoses.	92	93	4.5	78	2.3	2.3	Monthly	Weekly
269.	Repair or replace wiring harness for electronic fuel injection system.	12	34	1.6	18	2.9	2.3	Possible	-

270.	Repair or service carburetors.	92	97	4.8	78	2.7	2.8	Weekly	Daily
271.	Repair or service exhaust emission control systems.	87	99	4.2	68	2.4	2.8	Weekly	Daily
272.	Service or repair turbocharger.	13	30	.6	7	2.6	2.1	Possible	Possible
273.	Service or replace manifold head controls.	63	76	2.6	33	2.1	2.5	Monthly	Monthly
274.	Service or replace units in vacuum systems.	83	86	3.9	63	2.3	2.6	Monthly	Monthly
	DUTY K: MAINTAINING AND REPAIRING COOLING SYSTEMS								
275.	Check coolant freezing point.	95	97	4.2	67	2.4	2.5	Weekly	Weekly
276.	Check coolant temperature.	85	92	4.0	62	2.2	2.3	Weekly	Weekly
277.	Check overflow tank and accessories.	93	93	4.0	65	2.2	2.3	Weekly	Daily
278.	Chemically clean and flush cooling system.	73	88	3.3	52	2.1	2.4	Monthly	Monthly
279.	Inspect, adjust, and replace fan.	87	92	3.8	65	2.2	2.5	Monthly	Monthly
280.	Inspect and repair blowers on air-cooled engines.	42	54	2.1	34	2.5	2.5	Seldom	Monthly
281.	Inspect water hoses.	95	97	4.4	75	2.3	2.5	Daily	Daily
282.	Remove and reinstall radiators.	93	97	3.8	65	2.1	2.5	Weekly	Monthly
283.	Replace freeze plugs.	85	92	3.2	50	2.3	2.4	Monthly	Monthly
284.	Replace heater hoses.	93	97	4.2	67	2.3	2.5	Monthly	Weekly
285.	Replace radiator hoses.	95	97	4.2	67	2.3	2.6	Weekly	Weekly

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers 1%	Percent Who Now Do Each: Desired by Supervisors 2%	Extent Tasks Are Part of The Job: Average Rating by Workers 6	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job 6%	Relative Importance of Tasks to Job: Average Rating by Workers Doing It 8	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done 9	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task 3	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done 4
286.	Replace variable-speed fan.	88	92	3.5	53	2.2	2.4	Yearly	Monthly
287.	Replace water pump.	93	97	4.2	70	2.4	2.7	Monthly	Monthly
288.	Solder minor leaks in radiator.	75	77	2.3	32	2.2	2.1	Yearly	Yearly
289.	Test and replace coolant pressure caps.	93	97	4.0	67	2.1	2.3	Weekly	Weekly
290.	Test and replace thermostat.	95	97	4.3	68	2.3	2.5	Weekly	Weekly
DUTY L:	MAINTAINING AND REPAIRING STANDARD AND POWER STEERING UNITS								
291.	Adjust worm and sector in steering box.	80	92	3.7	63	2.4	2.6	Monthly	Monthly

292.	Inspect and replace steering spindles.	67	88	3.5	57	2.4	2.5	Yearly	Monthly
293.	Inspect steering.	85	97	4.3	72	2.6	2.8	Weekly	Daily
294.	Lubricate the power steering.	72	77	2.8	42	2.0	2.2	Monthly	Weekly
295.	Lubricate the steering box and linkage.	77	92	3.0	45	2.0	2.2	Monthly	Daily
296.	Rebuild power steering cylinder.	55	77	2.7	37	2.4	2.4	Yearly	Yearly
297.	Repair or replace manual steering components.	78	96	3.7	63	2.6	2.6	Monthly	Monthly
298.	Repair or replace power steering components.	73	90	3.3	50	2.5	2.6	Monthly	Monthly
299.	Repair or replace power steering pumps.	73	93	3.4	48	2.5	2.5	Yearly	Monthly
300.	Repair or replace tilt and telescoping and collapsible mast jackets.	52	65	2.2	25	2.2	2.3	Yearly	Yearly
301.	Replace belts and set tension.	90	93	4.7	75	2.3	2.7	Weekly	Daily
302.	Replace pivot points on power steering linkage.	63	85	2.7	38	2.4	2.6	Monthly	Monthly
303.	Replace pivot points on steering linkage.	65	90	3.1	46	2.4	2.6	Monthly	Monthly
304.	Service filter in power steering.	40	76	2.5	35	2.0	2.3	Yearly	Yearly
DUTY M:	MAINTAINING AND REPAIRING BRAKING SYSTEMS								
305.	Adjust brakes.	95	99	4.8	73	2.5	2.7	Weekly	Daily

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers 1%	Percent Who Now Do Each: Desired by Supervisors 2%	Extent Tasks Are Part of The Job: Average Rating by Workers 6	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job 6%	Relative Importance of Tasks to Job: Average Rating by Workers Doing It 8	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done 9	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task 3	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done 4
306.	Adjust hand brake linkage.	93	99	4.6	75	2.3	2.5	Monthly	Weekly
307.	Adjust hand brake external band.	68	85	3.4	51	2.3	2.4	Monthly	Monthly
308.	Bleed brakes.	90	99	4.8	82	2.5	2.8	Weekly	Weekly
309.	Free up parking brake cables.	88	97	4.1	63	2.2	2.4	Monthly	Monthly
310.	Inspect and repair brake air compressors.	27	45	1.9	27	2.7	2.5	Yearly	Yearly
311.	Inspect and replace brake pads (disc brakes).	87	99	4.6	73	2.6	2.9	Weekly	Weekly
312.	Inspect and turn rotor if necessary (disc brakes).	62	84	3.8	56	2.7	2.7	Monthly	Weekly
313.	Inspect and turn brake drums.	70	85	3.9	62	2.7	2.7	Weekly	Weekly

314.	Inspect and service air tanks and valves.	35	55	2.6	38	2.4	2.5	Yearly	Monthly
315.	Inspect, repair or replace self adjusters.	87	95	3.8	58	2.4	2.7	Weekly	Weekly
316.	Perform operational brake inspections.	92	99	4.8	82	2.5	2.8	Weekly	Daily
317.	Recondition backing plates.	48	64	2.2	25	2.0	2.3	Yearly	-
318.	Reline brake shoes.	58	65	3.1	48	2.3	2.5	Monthly	Monthly
319.	Repair air brake systems.	30	46	2.1	33	2.4	2.3	Yearly	Yearly
320.	Repair disk brakes.	83	97	4.4	70	2.6	2.9	Weekly	Weekly
321.	Repair or replace master cylinder.	88	97	4.5	77	2.7	2.8	Monthly	Monthly
322.	Repair or replace hydraulic power brake units.	77	96	3.7	55	2.5	2.8	Monthly	Monthly
323.	Repair or replace hydraulic control valves.	68	93	3.2	45	2.5	2.5	Yearly	Monthly
324.	Repair or replace hydraulic lines and fittings.	85	99	4.1	65	2.5	2.7	Monthly	Monthly
325.	Repair or replace hydraulic power cylinders.	73	88	3.5	56	2.6	2.7	Monthly	Monthly
326.	Repair or replace wheel cylinder.	88	99	4.5	77	2.6	2.8	Monthly	Monthly
327.	Replace brake hoses and lines.	87	99	4.4	70	2.5	2.7	Monthly	Monthly
328.	Replace brake shoes.	90	99	4.8	82	2.5	2.8	Weekly	Weekly
329.	Replace hand brake linkage.	87	99	3.9	57	2.3	2.4	Yearly	Yearly

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers 1%	Percent Who Now Do Each: Desired by Supervisors 2%	Extent Tasks Are Part of The Job: Average Rating by Workers 6	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job 6%	Relative Importance of Tasks to Job: Average Rating by Workers Doing It 8	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done 9	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task 3	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done 4
330.	Replace hand brake external band.	53	78	2.7	38	2.1	2.3	Yearly	Yearly
DUTY N:	MAINTAINING AND REPAIRING FRONT ENDS								
331.	Adjust or replace torsion and trunion bars.	63	81	2.7	41	2.4	2.5	Yearly	Monthly
332.	Adjust and repack front wheel bearing.	90	97	4.6	80	2.4	2.7	Weekly	Weekly
333.	Balance wheels and tires.	73	89	4.2	67	2.4	2.6	Weekly	Daily
334.	Inspect and align front end.	57	84	3.5	49	2.7	3.0	Weekly	Daily
335.	Inspect and align rear end.	37	54	1.9	22	2.3	2.4	Yearly	Monthly
336.	Inspect and replace steering damper.	33	66	2.9	41	2.1	2.5	Yearly	-

337.	Inspect wheel bearings.	92	97	4.5	73	2.4	2.8	Weekly	Daily
338.	Inspect and repair front suspension systems.	73	90	4.4	73	2.6	2.8	Monthly	Daily
339.	Lubricate ball joints.	85	96	3.7	55	2.1	2.3	Monthly	Daily
340.	Lubricate the front and rear suspension.	80	95	3.8	55	2.0	2.3	Monthly	Daily
341.	Perform visual inspections of suspension systems.	80	96	4.8	80	2.5	2.7	Daily	Daily
342.	Rebush king pins or link pins.	60	82	3.1	53	2.4	2.4	Yearly	Yearly
343.	Repair or replace rear suspension system.	68	88	3.4	52	2.4	2.4	Yearly	Monthly
344.	Replace ball joints.	73	90	3.8	63	2.5	2.9	Monthly	Monthly
345.	Replace front wheel bearings grease seal.	90	96	4.3	70	2.2	2.5	Monthly	Weekly
346.	Replace front suspension control arms and bushings.	67	90	3.9	62	2.4	2.7	Yearly	Monthly
347.	Replace shock absorbers and mounting.	85	97	4.6	75	2.1	2.4	Monthly	Weekly
DUTY O:	MAINTAINING AND REPAIRING AUTOMOBILE AIR CONDITIONERS								
348.	Inspect and refill system with freon.	52	80	2.9	42	2.5	2.6	Weekly	Weekly
349.	Diagnose air conditioning malfunctions.	53	80	2.9	41	2.5	2.8	Weekly	Weekly

Table 1 - Continued

Tasks of Automotive Mechanics	TIQ Question:	Percent Who Now Do Each: Actual, by Workers	Percent Who Now Do Each: Desired by Supervisors	Extent Tasks Are Part of The Job: Average Rating by Workers	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job	Relative Importance of Tasks to Job: Average Rating by Workers Doing It	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done
		1%	2%	6	6%	8	9	3	4
350.	Install air-conditioners in vehicles.	38	70	1.8	31	2.1	2.5	Yearly	Yearly
351.	Pressure test, performance test, and leak test the system.	50	80	2.9	41	2.5	2.8	Weekly	Weekly
352.	Repair or replace air conditioning compressor.	57	80	2.8	42	2.3	2.6	Monthly	Monthly
353.	Repair automatice a/c and heater systems vacuum and eletrical circuits.	53	72	2.5	34	2.5	2.8	Monthly	Monthly
354.	Repair compressor shaft seals.	43	66	2.0	27	2.5	2.7	Monthly	Monthly
355.	Replace compressor seals.	43	76	2.4	32	2.5	2.6	Monthly	Monthly
356.	Replace condenser in air conditioning unit.	45	80	2.3	29	2.3	2.6	Yearly	Monthly

357.	Replace air conditioner fan motor.	57	82	2.8	36	2.2	2.5	Yearly	Monthly
358.	Replace evaporator in air conditioning unit.	43	78	2.2	27	2.3	2.6	Yearly	Yearly
359.	Replace dryer in air conditioning unit.	48	77	2.8	30	2.4	2.6	Yearly	Monthly
360.	Replace expansion valve in air conditioning unit.	48	78	2.4	32	2.4	2.6	Monthly	Monthly
361.	Replace freon control valve or diaphragm in air conditioning unit.	38	76	2.2	29	2.5	2.6	Monthly	Monthly
362.	Service air conditioner control cables and switches.	57	80	2.8	41	2.3	2.5	Monthly	Weekly
DUTY P:	MAINTAINING AND REPAIRING AUTOMOBILE HEATERS								
363.	Diagnose heating system malfunctions.	92	95	4.2	70	2.5	2.7	Monthly	Weekly
364.	Inspect and replace thermostat.	90	95	4.2	63	2.3	2.6	Monthly	Weekly
365.	Inspect and replace defroster hose.	87	93	3.6	55	2.0	2.3	Yearly	Monthly
366.	Replace heater water control units.	88	93	4.0	60	2.2	2.5	Monthly	Monthly
367.	Remove and repair or replace heater core.	87	92	3.6	52	2.3	2.5	Monthly	Monthly
368.	Service heater control components.	88	92	3.9	62	2.3	2.5	Monthly	Weekly
369.	Service or replace circulating heaters.	65	74	2.7	45	2.2	2.5	Yearly	Monthly

Table 1 - Continued

Tasks of Automotive Mechanics — TIQ Question:	Percent Who Now Do Each: Actual, by Workers	Percent Who Now Do Each: Desired by Supervisors	Extent Tasks Are Part of The Job: Average Rating by Workers	Extent Tasks Are Part of The Job: % Who Say It Is at Least a Substantial Part of Their Job	Relative Importance of Tasks to Job: Average Rating by Workers Doing It	Relative Importance of Tasks to Job: Average Rating by Supervisors Desiring It Done	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency by Each Worker Doing the Task	How Often Tasks Are Done by Each Worker Who Performs Them: Average Frequency Wanted by Supervisors Desiring It Done
TIQ Question:	1%	2%	6	6%	8	9	3	4
370. Service or replace gas heaters.	25	31	1.2	16	2.2	1.9	Seldom	Yearly
DUTY Q: LUBRICATING AND MAINTAINING								
371. Change oil and filters.	82	95	3.7	55	2.1	2.3	Monthly	Daily
372. Inspect and clean automobile interiors.	28	53	1.5	17	1.8	2.0	-	Weekly
373. Lubricate vehicles and equipment.	73	90	3.4	49	2.0	2.2	Monthly	Daily
374. Remove, repair or replace tires.	62	77	3.0	43	2.1	2.2	Monthly	Weekly
375. Perform road service.	65	78	3.0	43	2.3	2.4	Weekly	Weekly
376. Pick up stalled vehicles.	62	69	2.6	37	2.1	2.2	Monthly	Weekly
377. Service vehicles with fuel or oil.	53	73	2.6	42	1.9	2.0	-	Daily

378.	Maintain tire removal equipment.	28	58	.9	8	2.1	2.0	-	-
379.	Maintain washrack equipment.	15	45	.7	8	2.2	2.0	Yearly	Daily
380.	Winterize vehicles.	77	93	3.4	52	2.3	2.5	Weekly	Weekly

Frequency of Use of Scale Categories

It is of interest to note the extent to which each of the scale categories on the questions of the Task Inventory Questionnaires were used. Table 2 provides an overall tally of these responses. There seemed to be a quite reasonable distribution of category usage, with some emphasis on those which might logically be expected.

Of particular notice is the use of the four undefined scale levels on Question 6, Extent Task Is Part of the Job. Undefined levels 2, 3, 5, and 6 together accounted for about one-third of all seven response levels beyond the "0" ("not a part of the job") level. This result helps allay concern that workers would not understand or use scale levels which were not defined in some statement form.

Consistency and Interrelationships of Task Questions

Each of the groups of 60 mechanics and 35-39 supervisors answering a task question were divided alternately into two subgroups of 30 mechanics and 17-20 supervisors each. These subgroups of respondents were then used to compute average responses for each task question. This permitted a comparison to be made of how consistent were the average answers for a question, by relating those given by one half of the respondents to those given by the other half of respondents. Table 3 lists the product-moment correlations obtained between subgroups for Questions 1 through 11, and for training categories within Questions 10 through 13. The correlations were calculated across all 380 listed tasks, even though 59 were subsequently considered to be of low relevance to the occupation.

Where a question called for an answer to be given for each task, it will be noted that the subgroups provided highly consistent answers. Where the respondents were to provide answers only for tasks marked as part of the job, the correlations declined sharply. In these instances many task averages were based on fewer respondents than when all were required to mark an answer.

Such apparent instability, however, is somewhat misleading. A number of the tasks were not highly relevant to the occupation of Automotive Mechanic. These contributed considerable instability to average values computed on a task question, because so few ratings entered into their computation. Scale consistency measures, therefore, would tend to reflect minimum estimates of inter-group relationships.

On the matter of the extent to which each task question relates to other task questions, product-moment correlations were

Table 2

Distribution of Individual Responses on Each Task Question

Response Categories	60 Mechanics	35 or 39 Supervisors
Occurrence of Task (Questions 1 and 2)		
Task Not Performed		
Group 1		
(60 Mechanics Answering Questions 1-3-8)	10,055	
(35 Supervisors Answering Questions 2-7-9-10)		3,966
Group 2		
(39 Supervisors Answering Questions 2-4-13-11)		4,304
Frequency of Task Performance (Questions 3 and 4)		
Frequency Categories:		
Not Normal, But Have Done	877	648
Less Than Once per Year	385	597
Once per Year	1,547	1,316
Once per Month	3,920	2,570
Once per Week	3,052	1,619
Once per Day	1,401	1,301
Several Times Daily	1,126	2,004
Extent Task Is Part of the Job (Question 6)[a]		
Extent Categories:		
Not a Part of Job	7,814	
Minor Part	2,305	
2	1,311	
3	1,562	
Substantial Part	3,791	
5	1,135	
6	787	
Most Significant Part	3,915	

Table 2-continued

Response Categories	60 Mechanics	35 or 39 Supervisors
Time to Qualify (Question 7)		
On-the-Job Qualification Time Categories:		
Never Necessary		334
Beyond 3 Years on Job		360
Within 1st 3 Years		946
Within 1st Year		1,981
Within 1st 6 Months		1,116
Within 1st 3 Months		1,090
Within 1st Month		1,503
Within 1st Week		1,718
Task Importance to the Job (Questions 8 and 9)		
Importance Categories:		
Low (relatively unimportant)	1,725	985
Moderate (important, but not essential)	4,030	2,066
High (essential)	6,284	5,745
Supervisor Suggestions (Questions 10 and 11)		
Possible to Improve Task Procedures		1,182
Means for Improvement of Task Procedures:		
Handbook or Other Job Guide		168
Improve Directives		85
Improve Training Content		788
Research or Special Study		104
Don't Know		25
Other		9
Not Marked, or Unusable Response		3
Poorly Performed Tasks		615
Reasons for Unsatisfactory Task Performance:		
Lack of Interest or Poor Attitude		182
Ineffective Training Programs		175
Have More Important Matters to Do		69
Extremely Difficult to Master		170
Don't Know		13
Other		3
Not Marked, or Unusable Response		3

Table 2-continued

Response Categories	60 Mechanics	35 or 39 Supervisors
Learning Location (Questions 12[a] and 13)		
Location Categories:		
Prior to Training	588	274
In Formal Training Program	10,964	6,184
On the Job Site, After Employment Experience in Related or Entry Occupation	1,942	757
Other	94	1
Nothing to Learn	2,528	126
Not Marked, or Unusable Response	274	

[a]Questions 6 and 12 were to be answered for all listed tasks; hence, the large frequency of answers that a task is "not part of the job" or there is "nothing to learn." Workers answering Questions 6 and 12 were not asked first to check tasks on Question 1. In Question 12 this interpretation is confounded with a possible intent to note actual job tasks which in fact require no special learning.

Table 3

Inter-Group Correlations for Each Task Question

Task Question and Type of Average Value Used	Correlation Over All Listed Tasks
Question 1: Occurrence* (percent of workers checking task)	.98
Question 2: Occurrence* (percent of supervisors checking task)	.97
Question 3: Frequency (worker medians)	.63
Question 4: Frequency (supervisor medians)	.73
Question 6: Part of Job* (worker means)	.97
Question 7: Time to Qualify (supervisor medians)	.84
Question 8: Job Importance (worker means)	.58
Question 9: Job Importance (supervisor means)	.56
Question 10: Procedure Improvement (percent of supervisors checking task)	.72
Question 10: Training Content (percent of supervisors suggesting training)	.60
Question 11: Poorly Performed (percent of supervisors checking task)	.53
Question 11: Training Reason (percent of supervisors suggesting training)	.32
Question 12: School Location * (percent of workers suggesting school learning)	.89
Question 12: Job Location * (percent of workers suggesting on-job learning)	.77

Table 3-continued

Task Question and Type of Average Value Used	Correlation Over All Listed Tasks
Question 13: School Location (percent of supervisors suggesting school learning)	.55
Question 13: Job Location (percent of supervisors suggesting on-job learning)	.47

*Note that Questions 1, 2, 6, and 12 called for answers to be given for each listed task. The other questions did not, and averages were computed for each task only on the basis of persons actually responding.

computed between various pairs of questions. These scale intercorrelations are cited in Table 4, with the caution to the reader that they permit only very tentative interpretations. Scales were not fully comparable in terms of their underlying dimensions, with percentages sometimes correlated with medians. Additionally, the correlations were computed across all 380 listed tasks, and many less relevant tasks entered into the figures. Thus, the correlations would tend to be minimum estimates of these interrelationships.

Table 4 shows the intercorrelations separately for the two halves of the survey data, excluding Questions 12 and 13 which did not lend themselves to comparisons with other scales. Stability of these relationships might be inferred by the extent to which these two subgroups of respondents produced nearly identical interscale correlations. It is apparent that Question 1, 2, and 6 (Task Occurrence and Part of the Job) were all highly interrelated, but not completely so. Task Frequency (Question 3) and Time to Qualify (Question 7) were moderately related to several other scales. Ratings of Job Importance (Questions 8 and 9) tended to be independent of measures other than Task Occurrence. The percentages of supervisors checking tasks on Questions 10 and 11 were correlated somewhat with other scales, but the meaningfulness of the relationships is uncertain. Both halves of the supervisor group provided trivial or no relation between either Question 4 or Question 7 and measures of Job Importance (Questions 8 and 9) and Problem Tasks (Questions 10 and 11).

Where there were comparable task questions between workers and supervisors, there were mixed results. Questions 1 and 2 (Task Occurrence) showed considerable relationship between answers of workers and supervisors. However, there was only a small to moderate relationship between Questions 3 and 4 (Frequency of Performance), and between Questions 8 and 9 (Job Importance). This might indicate that supervisors are not highly aware of what mechanics actually do, or that the job assignments are sufficiently diverse (from one employer to the next) to inhibit consensus.

IMPLICATIONS OF FINDINGS

The tables of data in Appendix C provide a wealth of provocative information, depending on the needs and interests of the reader.

Worker-Supervisor Differences

Tables C-1, C-2, and C-4 contain a column showing the difference of average responses between workers and supervisors on questions of Task Occurrence, Job Importance, and Frequency of Performance. When there is a large discrepancy between the two

Table 4

Task Scale Interrelationships
(based on averages for all 380 tasks, using halved groups of respondents)

	Q2 %	Q3 Medians	Q4 Medians	Q6 Means	Q7 Medians	Q8 Means	Q9 Means	Q10 %	Poorly Performed (Q11%)
Task Occurrence (Q1%) and:									
1st Half of Workers	.96	.41	.29	.95	.67	.29	.63	.56	.28
2nd Half of Workers	.95	.46	.14	.96	.78	.48	.40	.51	.02
Task Occurrence (Q2%) and:									
1st Half of Supervisors		.36	.26	.93	.64	.30	.66	.55	.25
2nd Half of Supervisors		.49	.19	.93	.77	.51	.45	.57	.09
Frequency of Performance (Q3 Medians) and:									
1st Half of Workers			.50	.46	.46	.62	.35	.31	.23
2nd Half of Workers			.61	.48	.43	.69	.33	.31	.21
Frequency of Performance (Q4 Medians) and:									
1st Half of Supervisors				.35	.45	.19	.29	.18	.22
2nd Half of Supervisors				.21	.20	.16	.13	.10	.14
Extent Task Is Part of Job (Q6 Means) and:									
1st Half of Workers					.69	.72	.67	.54	.26
2nd Half of Workers					.75	.48	.42	.54	.06

Table 4-continued

	Q2 %	Q3 Medians	Q4 Medians	Q6 Means	Q7 Medians	Q8 Means	Q9 Means	Q10 %	Poorly Performed (Q11%)
Time to Qualify (Q7 Medians) and:									
1st Half of Supervisors						.19	.37	.26	.07
2nd Half of Supervisors						.31	.32	.30	.06
Job Importance (Q8 Means) and:									
1st Half of Workers							.32	.27	.19
2nd Half of Workers							.51	.36	.19
Job Importance (Q9 Means) and:									
1st Half of Supervisors								.59	.31
2nd Half of Supervisors								.40	.19
Procedure Improvement (Q10%) and:									
1st Half of Supervisors									.45
2nd Half of Supervisors									.38

groups, this suggests where there may be real differences in perceptions and expectations. Such differences warrant further examination to establish the reason for each deviation and its meaningfulness for curriculum purposes.

On Table C-1 it can be noted that there were a very large number of tasks (97) where the percentages of respondents checking a task differed by at least 20% between workers and supervisors. These were overwhelmingly indicative that supervisor expectations for the typical mechanic were higher than actual performance of individual workers. Of these 97 tasks, 54 were in Duties A through E, which are not specific to equipment repair. Twenty-one occurred in Duty B (Supervising) alone. In total, the six most directly relevant duties for mechanics evidenced only a half dozen of these differences in ratings of job occurrence. These were in the duties involving engine overhaul, power trains, automatic transmissions, electrical systems, cooling systems, and auto heaters (Duties F, G, H, I, K, and P). Of the 21 tasks on which worker-supervisor differences were greater than 30%, 16 occurred in Duties B, C, and O (Supervising, Evaluating and Inspecting, and Air Conditioners).

Table C-1 also lists the differences in responses to Questions 1 and 6, where different groups of workers answered each question. These questions, however, are not directly comparable. It had been assumed that the "0" rating on Question 6 would be the same as not checking a task on Question 1. This turned out to be an over-simplified interpretation of the scale usage on Question 6. Apparently workers tended to use scale levels of 1, 2, and even 3 on Question 6 to anticipate tasks they might be called upon to perform. This was particularly true for the duty areas not specific to equipment repair (Duties A, B, C, D, and E).

There are 52 tasks on Table C-4, Frequency of Performance, for which a worker-supervisor difference in average rating was as large as 1.5 scale units or greater. All but 21 of these differences can be attributed to the fact that few ratings entered into their averages, since only 21 of these tasks are included in the Table 1 list of the more job-relevant tasks. Thus, caution in using task data must be exercised whenever there are very few workers or supervisors providing that data for a task. Duties B and Q accounted for 10 of the 21 job-relevant differences.

In examining Table C-3, it can be noted that only six of the 21 job-relevant tasks (338, 339, 340, 371, 373, and 377) were any substantive part of the occupational work, achieving a Question 6 rating greater than 2.0. These six tasks were in Duties N and Q. They tended to have supervisor expectations of more frequent performance than workers reported: daily expectations as opposed to monthly performance. This exemplifies a possible use by supervisors of the "daily" frequency to imply a task should be done "as necessary." In this instance, the apparent difference between workers and supervisors may not be a real difference in job perceptions.

No job-relevant task exhibited a worker-supervisor difference of 1.0 scale units or greater on Questions 8 and 9, Job Importance. In fact, only one relevant task had a difference greater than .5 scale units (Tasks 269). All other differences of at least 1.0 that are cited on Table C-2 can be attributed to instability of averages computed from too few respondents. That is, they occurred on tasks of least relevance to the occupation.

Minor deviations should be ignored. The margin of measurement error is such that the data can only indicate tendencies, not precise measures. However, when large numbers of respondents generally agree, and when group differences are reasonably large, these task data can be quite informative and meaningful.

Some Clues Regarding Need for Training

The data need further analysis and interpretation in order to be used effectively in resolving curriculum issues. The obvious first step would be to eliminate from further training consideration those tasks which are not of some minimal relevance to the occupation. This was done to produce the task listing in Table 1, using information on what proportion of workers do and should perform a task. While useful to reduce the size of the total list, the results may mask some issues that could have meaning for some purposes. Thus, Table 1 omits Tasks 34, 58, 61, and 62 because few workers do them, yet one-third of the supervisors said they should be done.

Examination of the Appendix C data on the remaining tasks in Table 1 can provide a variety of clues as to whether or not each task warrants training. In some instances there may be unresolved differences and conflicts in the several data summaries. These raise questions of why are there such differences, and what do they imply for curriculum planning or other purposes? Additional attention then needs to be focused on these targeted issues, with perhaps some other information being necessary before such issues can be resolved. The advantage of the present data is that they may help focus and direct this attention.

Three tasks are used below to illustrate some of the clues that might be obtained from the data.

Task 57, "Estimate cost of vehicle repairs," is rated as a moderately relevant part of the job, performed often by nearly half the workers and is important to the job. On examining Tables C-5 and C-6, however, the task is one that can take a relatively long time to learn on the job and neither workers nor supervisors suggest that the task should be learned primarily in school. In fact, both groups lean heavily on work experience as the basis for acquiring the task skill.

Two other common tasks are Tasks 160, "Run compression test," and 249, "Adjust carburetor." Competency on both tasks is expected early on the job. In both cases, the majority of workers and supervisors agree that the skills should be learned primarily in school prior to employment. Table C-7 indicates, however, that existing training on these matters may not be sufficiently effective. At least 20% of the supervisors on Question 10 indicated that improvement in procedures was needed for both tasks, with improvement of the content of formal training suggested as the appropriate means for accomplishing this change in work performance. This problem identification is supported for Task 249 by supervisors on Question 11, with 12% indicating that the task is poorly performed by mechanics. However, no such performance indication is given for Task 160.

For interpreting Questions 10 and 11 in Table C-7, it is usually meaningful to examine tasks where 10% or more of the supervisors mark them as problem areas. Since ratings on these two questions are not called for on every task a supervisor says is job relevant, when 10 or 20% of them do check a particular task it generally would be indicative of a problem area. It may or may not suggest a training concern, however. The methods or reasons suggested by supervisors need to be examined for clues of what is the nature of the problem. In doing this, it is useful to acknowledge that "training" is the typical suggestion of how to alleviate a problem. When alternative suggestions receive a proportionately high use, even though they are suggested by fewer supervisors than those suggesting training, these alternate suggestions are often quite meaningful and warrant attention.

Of the 321 tasks listed in Table 1, supervisor answers to Question 7 (Time to Qualify) indicate that they expect workers to be able to competently perform only a little more than half of them within the first six months or so on the job. Of these, half are expected to be well performed by the first week or so. Early competency is particularly expected for tasks in Duties K, P, and Q (Cooling Systems, Heaters, and General). Other duties where early ability tends to be somewhat expected are Duties I, M, and N (Electrical Systems, Braking Systems, and Front Ends). Duties where the longest periods of time on the job appear available before competent performance is expected are Duties A, B, C, D, E, and O (Organizing, Supervising, Inspecting, Training, Maintenance Control, and Air Conditioners). Precise indications of task ratings on Question 7 are contained in Table 5 of Appendix C.

Of the tasks cited in Table 1, formal training programs were definitely recommended by mechanics for 202 tasks and by supervisors for 220 tasks, using the basis that 50% or more of each group suggesting a learning location did cite school training in Questions 12 and 13. Of these, mechanics and supervisors both

recommended training for 193 of the tasks. These were predominantly in Duties F through J and L through O, where there was agreement on 187 of the 230 relevant tasks. Refer to Table 6 in Appendix C for specific ratings of task learning locations.

Clues About Problem Areas

Questions 10 and 11 allowed supervisors to pinpoint potentially faulty areas of training and performance. Their suggestions warrant further exploration, of course, but they did seem to indicate that at least four tasks (of those cited as reasonably relevant in Table 1) could benefit by the development of procedural handbooks or other job guides:

Task 3. Develop troubleshooting procedures for use in locating vehicle malfunctions.
Task 4. Develop plans for performing maintenance.
Task 10. Establish methods to improve maintenance procedures.
Task 14. Inspect vehicles for compliances with local laws.

Research or other special study appears useful for one task:

Task 3. Develop troubleshooting procedures for use in locating vehicle malfunctions.

And, managers might be especially aware of attitudinal problems interfering with the desired performance of three tasks:

Task 15. Participate in personnel meetings.
Task 27. Complete work order form.
Task 119. Clean engine parts and check for condition.

Question 10 identifies 93 tasks (of those cited as reasonably relevant in Table 1) on which 15% or more of the supervisors indicated a possibility of improving task procedures. Along with principal metnods suggested for their improvement, these tasks were:

1. Provide a handbook or other job guide for four tasks (3, 4, 10, 14).

2. Improve directives for one task (14).

3. Improve training content for 79 tasks (3, 44, 52, 54, 57, 117, 119, 120, 121, 122, 123, 124, 125, 126, 128, 132, 133, 138, 139, 144, 148, 149, 151, 152, 153, 155, 156, 157, 158, 159, 160, 162, 163, 173, 175, 177, 181, 196, 199, 210, 212, 213, 214, 215, 216, 218, 220, 221, 223, 225, 226, 227, 232, 233, 234, 244, 246, 249, 250, 253, 255, 261, 270, 271, 286, 291, 293, 296, 316, 331, 334, 338, 339, 344, 349, 351, 353, 363).

4. Provide research or special study for one task (3).

5. No concensus on method, for eight tasks (18,29, 211, 228, 245, 248, 278, 380).

Question 11 identifies 30 tasks (of those cited in Table 1) on which 15% or more of the supervisors indicated that, for many workers, performance was generally poor. Prime reasons suggested for such unsatisfactory performance were:

1. Due to lack of interest or poor attitude for three tasks (15, 27, 119).

2. Due to ineffective training programs for seven tasks (3, 44, 153, 214, 216, 218, 300).

3. Due to mechanics having more important matters to do for three tasks (54, 56, 110).

4. Due to 12 tasks being extremely difficult to master (52, 120, 128, 177, 215, 221, 245, 248, 270, 349, 353, 363).

5. No concensus on reason, for five tasks (90, 155, 235, 334, 351).

Supervisor Suggestions for Improving Performance

Supervisors were generous with their comments. Such information is quite valuable for interpreting responses to some of the task statements. In instances where the task questionnaires asked raters for their comments and suggestions on specific items, a number of supervisors did provide such comments. These are listed below, with the caution that they are comments given by individual supervisors. These comments are not necessarily representative of the entire occupation, but they may provide useful clues to management and training personnel for planning efforts to improve worker effectiveness and performance.

Suggestions of ways to improve task procedures, other than the standard means listed on the Question 10 answer sheet, were as follows:

Task 14 - Have laws written by mechanics, not politicians.

Task 33 - Dealers do not mail special bulletins to us as much as I would like.

Task 44 - Should have clearinghouse for information on new cars, since dealers cannot service all they sell.

Tasks 9[illegible], 100 - Most do not realize that they must earn two times (plus) their labor intake to keep them where they are and with the same wage; some basic economic courses should be taught, and why shop tickets and work orders must be filled out correctly; without them the garage is lost, and the people who work there, too; I'll bet that 10-20% of all labor performed is free.

Task 255 - Many drivers-owners do not realize that there is an electrical throttle linkage on 1971-up cars; you must turn the key on first, then depress the accelerator to activate the choke-fast idle linkage.

Task 305 - We repair so many auto brake problems--so "butchered" it's time for another car; I do not believe that 5% of all mechanics in U.S. can adjust and service correctly.

Task 334 - Customer and mechanic instructions could help here; this area is a shame, probably 2/3 of all front end parts that hit the floor are good . . .

One supervisor provided a general comment on means for improving task procedures:

Operating within a service environment as we do, most of our recommendations for improvement are directed to outsiders; internally, we use training as the only means of improvement apart from exposure.

Question 11 asked supervisors for reasons why certain tasks were generally performed poorly. In addition to the use of standard answer categories, the following reasons were written in by some of the responding supervisors:

Task 22 - No one system works.

Task 44 - Frequently hampered by the fact that most mechanics have a poor understanding of basic science, such as electricity and thermodynamics.

Tasks 214, 265 - Electrical problems generally are the most trouble for the average mechanic, due to his lack of a basic knowledge of electricity.

General comments on Question 11 included the following:

To summarize Question 11, in my 27 years experience as service manager, I find that it isn't so much the lack of interest or otherwise that causes job come-backs, but rather the highly sophisticated systems that are being used in cars today and the constant changes from year to year; this change is as great a burden as learning the basics of mechanics.

An essay is needed to answer each one of these; each task is performed under the pressure of time, so they are naturally short-cutted; every item could be marked.

Additional Comments and Suggestions

Questions 12 and 13 (Learning Location) elicited some written comments, even though little emphasis had been directed toward such write-ins on the questionnaire. From workers on Question 12 came these comments:

Task 14 - State conducts schools for inspectors.

Tasks 1 through 116 - The mechanic is either going to get this experience at school or on the job, but only if he's going to look for a supervisory position.

Tasks 134, 135, 137, 142 - Usually done by sublet repair shop.

Task 161 - Against the law, should never be done.

Task 221 - Training is a necessity to learn difference in shorts and opens; learn to read schematics and diagrams is most important in electrical diagnosis.

Task 248 - Training is a must for the testing of dash units, but rewiring of dash units is usually done by sublet repair shops.

Tasks 265, 266, 267, 269, 272, 280, 310, 314, 319 - Possible specialized training after employment, for unusual items requiring more training than normal on-the-job instruction.

General comments on Questions 12 and 13 included the following:

I believe you have formal training in conjunction with on-the-job training.

I think the mechanic should have OJT (or some prior training) before any formal training, because formal training generally assumes the mechanic has a fair knowledge of the subject.

Many, many mechanics would be greatly benefited by a better understanding of human relations. Also, many mechanics have a poor understanding of economics other than their pay check; it would do well to include some basic economics in their schooling.

I really believe that even with good schooling, a person will learn 90% once he is on the job.

Raters also pointed out the need to state some tasks with greater clarity. Tasks which seemed to warrant further clarification were Tasks 39, 130, 135, 273, and 292.

Individual raters suggested statement modifications. One suggested that Task 134 should be expanded to include the action of "cleaning and inspection." Another felt that the action in Tasks 192 and 193 is more appropriately that of "replace," not "straighten." Similarly, in Task 201 the action "is usually that of replacing." One commented that Task 211 is part of Task 210. Task 273 elicited two types of suggestions: substituting the term "heat" for "head," and adding the term "thermactor system." Another asked whether Task 294 meant the "adding of P.S. fluid," and whether Task 296 meant "cylinder" was the same as "slave."

Some respondents suggested areas of omission in the task listing. These are represented in the following two comments:

> I notice in your list of activities that wind, water leak, noise, vibration, and harshness are not included. This is a very important and vital department of any dealership. Also, there is no mention of time cards, clocks, or records of work orders. Other suggestions: hydraulic lift operation and safety, safety in shop, acetylene and arc welding, maintenance of shop equipment, air operated tools (drills, impact tools, jacks, etc.)

> There is nothing on your list of activities about repairs of squeaks, rattles, wind noises, and water leaks; and not enough on tire and vibration problems.

These suggestions and potential item modifications may be useful considerations in any future applications of this task inventory. Interpretations of the specific task ratings may also be influenced by consideration of which tasks were too vague to yield accurate responses on the questions. On the other hand, the number of such items noted out of a total listing of 380 tasks was not highly disproportionate. There remain a great number of tasks, with associated task data, in which a reasonable amount of confidence can be placed.

USE OF THE DATA

From the experiences of the Cornell University surveys of ornamental horticulture jobs, it would appear that several types of user groups would be interested in task data (Berkey, 1975):

1. One group would be comprised of persons writing or updating curriculums for training programs to prepare students for initial employment in an occupation. This group needs a list of job tasks for which training is relevant, and information for use in identifying priorities of training need. A subset of this group would be those persons who also have responsibility for continuing education programs at the post-secondary level. For them, the total range of tasks performed in an occupation would be important, as well as identification of those tasks generally needing improved performance.

2. A second user group are those persons who may also belong to the first group, but who conduct local occupational surveys as needed for their individual training programs This group might well extract important survey information and take it to their advisory committee to verify local needs. Data more representative of performance requirements nation- and industry-wide could be compared with local results to assure that students are prepared for a wide scope of employment opportunities. To begin conducting their own local surveys, the existing task lists provide a starting point for development of their own lists which may include greater attention to local practices.

3. A third group is composed of research-oriented curriculum development personnel who are interested in developing new or improved procedures for analyzing the requirements of performance situations. For this group, a description of survey results can be used to compare with results from alternative procedures or surveys.

4. A fourth group consists of prospective workers in the occupation surveyed, and of the guidance counselors serving their needs. The identification of what work actually is being performed by workers may be an important source of information describing an occupation at a given point in time. One item of useful information might be data on how often a task is performed by a worker, though tasks frequently performed are not necessarily the critical tasks of the job.

One additional user group for occupational survey data is that of professional and labor associations. They are becoming increasingly concerned with activities to assure that unemployment, underemployment, and obsolescence among their members do not occur. Workshops and newsletters communicate information for skill development and upgrading.

Evidence of this concern in the automotive industry is apparent in the industry development of such training and instruction standards as:

1. Career development standards for vocational automotive service instruction, a publication project of the Motor Vehicle Manufacturers - American Vocational Association Industry Planning Council in cooperation with the Service Managers Committee, Motor Vehicle Manufacturers Association of the United States (1973).

2. ASCA's National apprenticeship and training standards for automobile mechanics, body repairer, and painter, a publication prepared by the National Apprenticeship and Technical Training Committee of the Automotive Service Councils of America (1974).

3. National Institute for Automobile Service Excellence competency tests, under which NIASE sponsors the development of a program for the voluntary testing and certification of mechanics (Bulletin of Information, 1975).

Application of the task survey approach to the development of training performance standards is currently underway by the International Union of Operating Engineers for the purpose of strengthening apprenticeship, training, and affirmative action programs.

Curriculum developers who plan training programs in schools and colleges offering specialized programs for potential mechanics may be interested in the importance or relevance of a job task to the mechanic of a particular type of business enterprise. For example, some programs may intend to train mechanics for employment on certain makes of automobiles, or in the motor pool of a government agency. The present survey data, however, do not indicate the significance of tasks for a single type of industry or enterprise. Rather, it is a composite cross-section of employment situations. The study would need to be repeated, using workers and supervisors from a particular type of industry, to obtain meaningful information based only on that industry. This could, of course, be done; and, if a description were available to represent a second industry, it would be most appropriate to compare results and note differences according to the type of industry involved.

In making use of the mechanic task data, there are several misconceptions to be avoided and cautions to be observed when interpreting this information. The data reports a picture of the occupation as it existed at the time of the survey, but the occupation is undergoing change and new surveys would be warranted to detect trends and determine task relevancy at different points in the future. Not all tasks in the total list are relevant to the job of Automotive Mechanics, nor are all job-relevant tasks appropriate for any one specific mechanic. These tasks vary in the degree to which they are job relevant, being performed by differing proportions of mechanics and each having its own level of value to the occupational assignment.

Additionally, the learning of a task is not an all-or-none proposition. For many tasks the learning process may only begin in pre-employment schooling, with job experience and company training programs serving to extend and complete that learning. Some tasks may not even warrant the attainment of full proficiency, with minimum capability being all that the job requires of a worker. Nor does job importance directly imply training importance for a task. Thus, despite a task's ratings of frequency, importance, significance, problems, and suggested learning locations, decisions by curriculum planners are still required on what and how much training is appropriate. These decisions, however, should be possible with reasonably assured accuracy and certainty when the planner can refer to an informed source of what work is currently done by workers in an occupation. The present report is intended to be of service in providing one such data base.

REFERENCES

American Psychological Association, American Educational Research Association, & National Council on Measurement in Education (Joint Committee, F. B. Davis, Chair.). Standards for educational and psychological tests (Rev. ed.). Washington, DC: American Psychological Association, 1974.

Ammerman, H. L. Manual of procedures for deriving training objectives for junior officers (Rev. ed., HumRRO Prototype Manual). Alexandria, VA: Human Resources Research Organization, HumRRO Division No. 5, November 1964.

Ammerman, H. L. Development of procedures for deriving training objectives for junior officer jobs (HumRRO Tech. Rep. 66-3). Alexandria, VA: Human Resources Research Organization, May 1966. (NTIS No. AD-663 167, ERIC Document Reproduction Service No. ED 017 759)

Automotive Service Councils of America, National Apprenticeship and Technical Training Committee. National apprenticeship and training standards for automobile mechanic, body repairer, and painter (Rev.). Washington: U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training, 1974.

Berkey, A. L. Personal communication, February 2, 1975.

Borcher, S. D., & Leiter, P. B. Automotive mechanics occupational performance survey (The Center for Vocational Education, R&D Series No. 86). Washington, DC: U.S. Government Printing Office, March 1973. (ERIC Document Reproduction Service No. ED 078 126)

Bulletin of information for voluntary mechanic testing and certification. Washington, DC: National Institute for Automobile Service Excellence, Fall 1975.

Career development standards for vocational automotive service instruction (5th ed.). Detroit: Motor Vehicle Manufacturers Association of the United States, 1973.

Charters, W. W., & Whitley, I. B. Analysis of secretarial duties and traits. Baltimore: Williams & Wilkins, 1924.

Christal, R. E. Implications of Air Force occupational research for curriculum design. In B. B. Smith & J. Moss, Jr. (Eds.), Report of a seminar: Process and techniques of vocational curriculum development. Minneapolis: Minnesota Research Coordinating Unit for Vocational Education, 1970.

Christal, R. E. The United States Air Force occupational analysis project (AFHRL-TR-73-75). Brooks Air Force Base, TX: Air Force Systems Command, Occupational Research Division, January 1974.

Downie, N. M., & Heath, R. W. Basic statistical methods. New York: Harper & Brothers, 1959.

Hemphill, J. K. Dimensions of executive positions (Bureau of Business Research Monograph No. 98). Columbus: The Ohio State University, College of Commerce and Administration, The Bureau of Business Research, 1960.

Melching, W. H., & Borcher, S. D. Procedures for constructing and using task inventories (The Center for Vocational Education, R&D Series No. 91). Washington, DC: U.S. Government Printing Office, March 1973. (ERIC Document Reproduction Service No. ED 105 093)

Morsh, J. E., & Archer, W. B. Procedural guide for conducting occupational surveys in the United States Air Force (PRL-TR-67-11). Lackland Air Force Base, TX: Air Force Human Resources Laboratory (AFSC), Personnel Research Division, September 1967. (NTIS No. AD-664 036)

Rupe, J. C. Research into basic methods and techniques of Air Force job analysis-IV (AFPTRC-TN-56-51). Lackland Air Force Base, TX: Air Force Personnel and Training Research Center (ARDC), Training Aids Research Laboratory, April 1956. (NTIS No. AD-105 552)

U.S. Equal Employment Opportunity Coordinating Council. Uniform guidelines on employee selection procedures (Rev., Staff Committee Draft). Unpublished federal guidelines, June 1974.

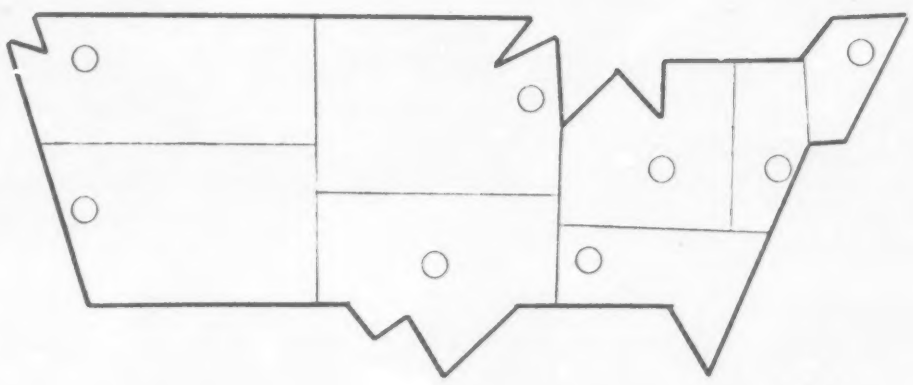
APPENDIX A

PARTICIPATING STATE AGENCIES AND THEIR KEY SUPPORTING PERSONNEL

DATA-GATHERING LOCATIONS FOR THE

1974 TASK INVENTOR' QUESTIONNAIRES

Washington	Wisconsin	Ohio	New Hampshire
California	Oklahoma	Mississippi	New Jersey



Network of state curriculum laboratories, research centers, and vocational agencies participating in the early 1974 administration of Task Inventory Questionnaires to workers and supervisors:

California

Vocational-Technical Education Curriculum Laboratory,
California State Department of Education

Patrick J. Weagraff, Director

Mississippi

Research and Curriculum Unit for Vocational-Techrical Education,
Mississippi State Division of Vocational and Technical
Education and Mississippi State University (cooperating)

James E. Wall, Associate Dean (R&D) and R/CU Director
James F. Shill, R/CU Co-Director

New Hampshire

Division of Vocational-Technical Education,
New Hampshire State Department of Education

Gloria Cooper, Director, Research Coordinating Unit
Deborah L. Bloxom, Associate Education Consultant
Richard L. Barker, Director, Professional Development

New Jersey

New Jersey Vocational-Technical Curriculum Laboratory,
Bureau of Occupational Research Development, New Jersey
State Division of Vocational Education

Joseph F. Kelly, Director

Ohio

Instructional Materials Laboratory,
The Ohio State University, Trade and Industrial Education
Services

Tom L. Hindes, Director

Oklahoma

Division of Research, Planning and Evaluation,
Oklahoma State Department of Vocational and Technical Education

William W. Stevenson, Director
Fern A. Green, Planning Unit Coordinator
Larry D. Johnson, Research Assistant
Ronald Meek, Coordinator, Curriculum and Instructional Materials Center

Washington

Curriculum Management Center,
Washington State Coordinating Council for Occupational Education

James L. Blue, Director

(with) Ross Byrd, Associate Professor
Department of Business Education and Administrative Management,
Central Washington State College

Wisconsin

Instructional Services,
Wixconsin Board of Vocational, Technical, and Adult Education

Clifford Zenor, Consultant

(with) Griff Dye, Consultant
Center for Vocational-Technical Education Studies,
University of Wisconsin-Madison

APPENDIX B

BACKGROUND CHARACTERISTICS OF RESPONDENTS

Appendix B contains background characteristics of the people answering the questionnaires. The source of the data for Tables 1-4 in this appendix was the Background Information page of the Task Inventory Questionnaires, while Table B-5 incorporates data reported by the agencies administering those questionnaires. Job, business, and training labels given in Tables 1-3 were options listed on each Background Information sheet, along with a category for noting other labels. Respondents were to check only one option. Multiple responses to a question were recorded as unknown, which commonly occurred in the citation of training sources and types of business.

Table	Description
B-1	Job Title
B-2	Type of Business
B-3	Source of Training
B-4	Years of Experience
B-5	Location Contexts

Table B-1

Job Title

Worker Titles	N	Percent
Automotive Mechanic, or Automobile Repairman, or Garage Mechanic	87	72.5
Engine Repair Mechanic	1	0.8
Truck Mechanic	4	3.3
Automotive Mechanic Apprentice, or Automotive Repair Helper or Assistant	0	0
Automotive Repair Specialist (for example, Electrical System)	10	8.3
Service Station Mechanic or Automotive Service Technician	1	0.8
Automobile Body Repairman	1	0.8
Other	3	2.5
Unknown	13	10.8
Totals	120	100.0

Supervisor Titles	N	Percent
Service Advisor or Service Writer	8	10.8
Service Manager	30	40.5
Garage Owner	8	10.8
Automobile Repair Service Salesman	0	0
Automobile Inspector, or Automobile Tester	1	1.4
Repair Shop Manager	7	9.5
Chief Mechanic	3	4.1
Other	14	18.9
Unknown	3	4.1
Totals	74	100.0

Table B-2

Type of Business

Business Types	Workers N	Workers Percent	Supervisors N	Supervisors Percent
Agriculture	1	0.8	0	0
Banking and Finance	0	0	0	0
Communications	6	5.0	4	5.4
Construction	0	0	0	0
Education	2	1.7	3	4.1
Equipment Servicing	15	12.5	7	9.5
Federal Agency	2	1.7	1	1.4
Food Processing	0	0	0	0
Health Services	0	0	0	0
Insurance	0	0	0	0
Legal Services	0	0	0	0
Manufacturing	0	0	2	2.7
Merchandising and Sales	5	4.2	5	6.8
Natural Resources (other than Agriculture)	0	0	0	0
Non-Federal Government (other than Education)	5	4.2	3	4.1
Research	1	0.8	0	0
Transportation	32	26.7	19	25.7
Utility (energy, water, fuel)	1	0.8	1	1.4
Other	33	27.5	23	31.1
Unknown	17	14.2	6	8.1
Totals	120	100.0	74	100.0

Table B-3

Source of Training

Training Sources	N	Percent
Public High School	5	4.2
Technical Institute or College	18	15.0
Manpower Development Program (MDTA)	2	1.7
Adult Education Program (other than MDTA)	0	0
Armed Services Technical School	3	2.5
Private Business, Trade, or Technical School	10	8.3
Community or Junior College	4	3.3
Senior College or University	0	0
Correspondence Courses	0	0
Employer Training Program	3	2.5
Equipment Manufacturer's Training Program	0	0
Formal Apprenticeship Program	4	3.3
Previous Work Experience in other types of jobs	3	2.5
On the Job (Self-Learned)	40	33.3
Other	0	0
Unknown	28	23.3
Totals	120	100.0

Table B-4

Years of Experience

Automotive Mechanics	N[a]	Mean No. of Years	SD	Range of Years Least	Most
Worked at Present Job	118	5.66	6.41	0	36
Worked in Automotive Repair Field	117	11.38	7.88	1	36

[a]Number of mechanics providing usable responses.

Table B-5

Location Contexts[a]

Type of Business Operation	Workers	Supervisors
New Car Dealer	23	12
Independent Garage	1	4
Agency Motor Pool	9	5
New and Used Car Dealership	27	9
Fleet Operation	2	2
City/County Government	9	4
Automotive Repair Operation	0	1
Unknown	49	37
Size of Business		
Small	2	5
Moderate	29	12
Large	16	9
Unknown	73	48
City Size		
Metropolitan	32	17
Moderate/Remote	7	1
Unknown	81	56

[a]Data provided by supporting state agencies for 120 workers (mechanics) and 74 supervisors.

APPENDIX C

TASK INVENTORY DATA

Appendix C contains a detailed presentation of the task inventory data in computer printout form. Each table is preceded by a description of the questions and response categories that are reported on that table.

Table	Description
C-1	Task Occurrence (Q1, Q2, and Q6)
C-2	Task Importance (Q8 and Q9)
C-3	Extent Task Is Part of the Job (Q6)
C-4	Frequency of Task Performance (Q3 and Q4)
C-5	Time to Qualify (Q7)
C-6	Learning Location (Q12 and Q13)
C-7	Supervisor Suggestions (Q10 and Q11)
C-8	Summary of Tasks by Percent of Workers Performing
C-9	Summary of Tasks by Percent of Supervisors Desiring Performance

Table C-1

Task Occurrence (Q1, Q2, and Q6)[a]

Question 1: Task Occurrence (Workers)

During the last year or so in your present job position as an Automotive Mechanic, which of the activities have you performed?

Response: Check mark for each task performed.

Question 2: Task Occurrence (Supervisors)

From your experience as a supervisor of one or more Automotive Mechanics, indicate which of the activities should be performed by Automotive Mechanics in your operation; that is, by such employees under your supervision in your shop or garage. Indicate which tasks your Automotive Mechanics should be doing as part of their job, even if only done once.

Response: Check mark for each task that mechanics are expected to do.

Question 6: Extent Task Is Part of the Position (Workers)

Answer this question so as to give the best description you can. For each task statement, rate how significant a part of your job it is. Consider and weigh its importance, frequency of occurrence, relevance, and any other factor which you think determines to what extent the task is part of your position. In your own mind, combine these factors into a single rating of how significant a part of your job it represents.

Categories and Values of the Response Scale:

0 = Definitely not a part of my job
1 = Under unusual circumstances may be a minor part of my job
2 = (not defined)
3 = (not defined)
4 = A substantial part of my job
5 = (not defined)
6 = (not defined)
7 = A most significant part of my job

[a]In Table C-1, positive (checked) responses are reported for Q1 and Q2. A composite response composed of any selection of scale ratings 1 through 7 is reported for Q6. The results indicate that Q6 is a more sensitive measure of minor tasks than the checklist used in Q1 and Q2. Because the group of workers responding to Q6 rated each task, the data provided by Q6 appear to include those they might do on some remote occasion.

Each of the 10 columns of Table C-1 is identified below.

Column 1: Number of Group 1 workers who checked (Question 1) that the task is performed.

Column 2: Percent of Group 1 workers checking the task (Question 1).

Column 3: Number of Group 2 workers who rated the task as being some part of the job (Question 6).

Column 4: Percent of Group 2 workers rating the task 1-7 (Question 6).

Columns 5 and 6: Composite of Column 1-4 data.

Column 7: Difference between worker groups responding to the task (Column 2 minus Column 4).

Column 8: Number of combined Groups 1 and 2 supervisors who checked (Question 2) that the task should be performed by mechanics.

Column 9: Percent of all supervisors checking the task (Question 2).

Column 10: Difference between workers and supervisors responding to the task (Column 2 minus Column 9).

TASK INVENTORY DATA SUMMARY
AUTO MECHANICS -- COMPOSITE

TABLE 1: TASK OCCURRENCE

	PERFORMED BY WORKERS							DESIRED BY ALL SUPERVISORS		
	Q1(+)		Q6(1-7)		Q1+Q6		D:Q1-Q6	Q2(+)		D:Q1-Q2
TASK	N	%	N	%	N	%	%	N	%	%
1	7	11.7	7	11.9	14	11.8	-0.2	16	21.6	-10.0
2	2	3.3	4	6.8	6	5.0	-3.4	7	9.5	-6.1
3	20	33.3	33	55.9	53	44.5	-22.6	50	67.6	-34.2
4	12	20.0	20	33.9	32	26.9	-13.9	38	51.4	-31.4
5	1	1.7	1	1.7	2	1.7	-0.0	5	6.8	-5.1
6	15	25.0	20	33.9	35	29.4	-8.9	36	48.6	-23.6
7	6	10.0	12	20.3	18	15.1	-10.3	20	27.0	-17.0
8	5	8.3	7	11.9	12	10.1	-3.5	12	16.2	-7.9
9	0	0.0	10	16.9	10	8.4	-16.9	14	18.9	-18.9
10	12	20.0	25	42.4	37	31.1	-22.4	27	36.5	-16.5
11	6	10.0	17	28.8	23	19.3	-18.8	17	23.0	-13.0
12	4	6.7	7	12.1	11	9.3	-5.4	18	24.3	-17.7
13	8	13.3	11	18.6	19	16.0	-5.3	22	29.7	-16.4
14	32	53.3	47	79.7	79	66.4	-26.3	53	71.6	-18.3
15	26	43.3	37	62.7	63	52.9	-19.4	49	66.2	-22.9
16	1	1.7	4	6.8	5	4.2	-5.1	10	13.5	-11.8
17	7	11.7	11	18.6	18	15.1	-7.0	20	27.0	-15.4
18	10	16.7	18	31.0	28	23.7	-14.4	29	39.2	-22.5
19	2	3.3	14	23.7	16	13.4	-20.4	20	27.0	-23.7
20	4	6.7	14	23.7	18	15.1	-17.1	15	20.3	-13.6
21	2	3.3	1	1.7	3	2.5	1.6	13	17.6	-14.2
22	7	11.7	17	28.8	24	20.2	-17.1	26	35.1	-23.5
23	3	5.0	13	22.0	16	13.4	-17.0	20	27.0	-22.0
24	5	8.3	13	22.0	18	15.1	-13.7	23	31.1	-22.7
25	5	8.3	8	13.6	13	10.9	-5.2	25	33.8	-25.5
26	3	5.0	9	15.3	12	10.1	-10.3	17	23.0	-18.0
27	18	30.0	25	42.4	43	36.1	-12.4	40	54.1	-24.1
28	7	11.7	9	15.5	16	13.6	-3.9	18	24.3	-12.7
29	7	11.7	14	23.7	21	17.6	-12.1	33	44.6	-32.9
30	1	1.7	15	25.4	16	13.4	-23.8	19	25.7	-24.0

TASK	PERFORMED BY WORKERS Q1(+) N	Q1(+) %	Q6(1-7) N	Q6(1-7) %	Q1+Q6 N	Q1+Q6 %	D:Q1-Q6 %	DESIRED BY ALL SUPERVISORS Q2(+) N	Q2(+) %	D:Q1-Q2 %
31	0	0.0	1	1.7	1	0.8	-1.7	13	17.6	-17.6
32	8	13.3	19	32.2	27	22.7	-18.9	28	37.8	-24.5
33	11	18.3	27	45.8	38	31.9	-27.4	34	45.9	-27.6
34	5	8.3	19	32.2	24	20.2	-23.9	32	43.2	-34.9
35	3	5.0	16	27.1	19	16.0	-22.1	23	31.1	-26.1
36	0	0.0	5	8.5	5	4.2	-8.5	11	14.9	-14.9
37	2	3.3	11	18.6	13	10.9	-15.3	8	10.8	-7.5
38	0	0.0	6	10.3	6	5.1	-10.3	19	25.7	-25.7
39	5	8.3	10	17.5	15	12.8	-9.2	21	28.4	-20.0
40	16	26.7	28	47.5	44	37.0	-20.8	44	59.5	-32.8
41	8	13.3	16	27.1	24	20.2	-13.8	33	44.6	-31.3
42	10	16.7	17	28.8	27	22.7	-12.1	17	23.0	-6.3
43	6	10.0	12	20.3	18	15.1	-10.3	34	45.9	-35.9
44	18	30.0	40	67.8	58	48.7	-37.8	46	62.2	-32.2
45	4	6.7	3	5.1	7	5.9	1.6	22	29.7	-23.1
46	7	11.7	16	27.1	23	19.3	-15.5	30	40.5	-28.9
47	1	1.7	5	8.5	6	5.0	-6.8	14	18.9	-17.3
48	5	8.3	8	13.6	13	10.9	-5.2	25	33.8	-25.5
49	9	15.0	10	16.9	19	16.0	-1.9	31	41.9	-26.9
50	2	3.3	2	3.4	4	3.4	-0.1	4	5.4	-2.1
51	4	6.7	6	10.2	10	8.4	-3.5	22	29.7	-23.1
52	46	76.7	55	91.7	101	84.2	-15.0	61	82.4	-5.8
53	15	25.0	31	51.7	46	38.3	-26.7	31	41.9	-16.9
54	33	55.0	44	73.3	77	64.2	-18.3	41	55.4	-0.4
55	0	0.0	10	16.7	10	8.3	-16.7	14	18.9	-18.9
56	18	30.0	25	42.4	43	36.1	-12.4	34	45.9	-15.9
57	26	43.3	32	53.3	58	48.3	-10.0	38	51.4	-8.0
58	1	1.7	2	3.3	3	2.5	-1.7	24	32.4	-30.8
59	4	6.7	10	16.7	14	11.7	-10.0	27	36.5	-29.8
60	8	13.3	18	30.0	26	21.7	-16.7	33	44.6	-31.3
61	1	1.7	14	23.7	15	12.6	-22.1	24	32.4	-30.8
62	4	6.7	15	25.0	19	15.8	-18.3	29	39.2	-32.5
63	8	13.3	19	31.7	27	22.5	-18.3	30	40.5	-27.2
64	24	40.0	36	60.0	60	50.0	-20.0	43	58.1	-18.1
65	19	31.7	35	58.3	54	45.0	-26.7	39	52.7	-21.0

TASK	PERFORMED BY WORKERS							DESIRED BY ALL SUPERVISORS		
	Q1(+)		Q6(1-7)		Q1+Q6		D:Q1-Q6	Q2(+)		D:Q1-Q2
	N	%	N	%	N	%	%	N	%	%
66	21	35.0	24	40.0	45	37.5	-5.0	25	33.8	1.2
67	49	81.7	55	93.2	104	87.4	-11.6	62	83.8	-2.1
68	49	81.7	54	91.5	103	86.6	-9.9	63	85.1	-3.5
69	36	60.0	48	80.0	84	70.0	-20.0	56	75.7	-15.7
70	4	6.7	15	25.0	19	15.8	-18.3	15	20.3	-13.6
71	12	20.0	28	46.7	40	33.3	-26.7	33	44.6	-24.6
72	41	68.3	53	88.3	94	78.3	-20.0	58	78.4	-10.0
73	1	1.7	5	8.5	6	5.0	-6.8	6	8.1	-6.4
74	11	18.3	20	33.9	31	26.1	-15.6	27	36.5	-18.2
75	7	11.7	25	42.4	32	26.9	-30.7	25	33.8	-22.1
76	0	0.0	14	23.7	14	11.8	-23.7	21	28.4	-28.4
77	2	3.3	10	16.9	12	10.1	-13.6	20	27.0	-23.7
78	24	40.0	46	78.0	70	58.8	-38.0	44	59.5	-19.5
79	0	0.0	17	28.8	17	14.3	-28.8	16	21.6	-21.6
80	1	1.7	15	25.4	16	13.4	-23.8	18	24.3	-22.7
81	0	0.0	13	22.0	13	10.9	-22.0	14	18.9	-18.9
82	0	0.0	5	8.6	5	4.2	-8.6	12	16.2	-16.2
83	0	0.0	11	18.6	11	9.2	-18.6	12	16.2	-16.2
84	4	6.7	23	39.0	27	22.7	-32.3	26	35.1	-28.5
85	0	0.0	8	13.6	8	6.7	-13.6	8	10.8	-10.8
86	0	0.0	12	20.3	12	10.1	-20.3	20	27.0	-27.0
87	0	0.0	4	6.8	4	3.4	-6.8	15	20.3	-20.3
88	0	0.0	6	10.2	6	5.0	-10.2	14	18.9	-18.9
89	20	33.3	36	60.0	56	46.7	-26.7	39	52.7	-19.4
90	11	18.3	20	33.9	31	26.1	-15.6	34	45.9	-27.6
91	31	51.7	39	66.1	70	58.8	-14.4	50	67.6	-15.9
92	11	18.3	27	45.8	38	31.9	-27.4	32	43.2	-24.9
93	16	26.7	32	54.2	48	40.3	-27.6	38	51.4	-24.7
94	3	5.0	15	25.4	18	15.1	-20.4	20	27.0	-22.0
95	1	1.7	6	10.2	7	5.9	-8.5	10	13.5	-11.8
96	14	23.3	22	37.3	36	30.3	-14.0	24	32.4	-9.1
97	37	61.7	45	77.6	82	69.5	-15.9	52	70.3	-8.6
98	1	1.7	8	13.6	9	7.6	-11.9	8	10.8	-9.1
99	4	6.7	22	37.3	26	21.8	-30.6	22	29.7	-23.1
100	20	33.3	29	50.0	49	41.5	-16.7	37	50.0	-16.7

TASK	PERFORMED BY WORKERS: Q1(+) N	Q1(+) %	Q6(1-7) N	Q6(1-7) %	Q1+Q6 N	Q1+Q6 %	D:Q1-Q6 %	DESIRED BY ALL SUPERVISORS: Q2(+) N	Q2(+) %	D:Q1-Q2 %
101	35	58.3	44	74.6	79	66.4	-16.2	50	67.6	-9.2
102	18	30.0	28	47.5	46	38.7	-17.5	37	50.0	-20.0
103	2	3.3	8	13.6	10	8.4	-10.2	10	13.5	-10.2
104	5	8.3	9	15.3	14	11.8	-6.9	13	17.6	-9.2
105	2	3.3	4	6.8	6	5.0	-3.4	10	13.5	-10.2
106	6	10.0	8	13.6	14	11.8	-3.6	20	27.0	-17.0
107	6	10.0	11	18.6	17	14.3	-8.6	24	32.4	-22.4
108	7	11.7	14	23.7	21	17.6	-12.1	20	27.0	-15.4
109	0	0.0	5	8.6	5	4.2	-8.6	11	14.9	-14.9
110	11	18.3	37	62.7	48	40.3	-44.4	29	39.2	-20.9
111	0	0.0	5	8.5	5	4.2	-8.5	12	16.2	-16.2
112	1	1.7	10	16.9	11	9.2	-15.3	10	13.5	-11.8
113	1	1.7	2	3.4	3	2.5	-1.7	3	4.1	-2.4
114	5	8.3	20	33.9	25	21.0	-25.6	26	35.1	-26.8
115	4	6.7	15	25.9	19	16.1	-19.2	21	28.4	-21.7
116	6	10.0	25	42.4	31	26.1	-32.4	12	16.2	-6.2
117	55	91.7	54	91.5	109	91.6	0.1	74	100.0	-8.3
118	45	75.0	52	86.7	97	80.8	-11.7	68	91.9	-16.9
119	51	85.0	56	93.3	107	89.2	-8.3	73	98.6	-13.6
120	53	88.3	53	89.8	106	89.1	-1.5	71	95.9	-7.6
121	52	86.7	52	86.7	104	86.7	0.0	71	95.9	-9.3
122	35	58.3	43	72.9	78	65.5	-14.5	57	77.0	-18.7
123	45	75.0	48	81.4	93	78.2	-6.4	69	93.2	-18.2
124	44	73.3	49	81.7	93	77.5	-8.3	69	93.2	-19.9
125	53	88.3	57	96.6	110	92.4	-8.3	74	100.0	-11.7
126	46	76.7	51	85.0	97	80.8	-8.3	66	89.2	-12.5
127	52	86.7	56	94.9	108	90.8	-8.2	73	98.6	-12.0
128	44	73.3	50	83.3	94	78.3	-10.0	66	89.2	-15.9
129	21	35.0	31	53.4	52	44.1	-18.4	41	55.4	-20.4
130	47	78.3	45	77.6	92	78.0	0.7	58	78.4	-0.0
131	48	80.0	53	89.8	101	84.9	-9.8	65	87.8	-7.8
132	54	90.0	55	93.2	109	91.6	-3.2	72	97.3	-7.3
133	40	66.7	52	88.1	92	77.3	-21.5	69	93.2	-26.6
134	11	18.3	20	34.5	31	26.3	-16.1	22	29.7	-11.4
135	13	21.7	22	40.7	35	30.7	-19.1	28	37.8	-16.2

TASK	PERFORMED BY WORKERS Q1(+) N	Q1(+) %	Q6(1-7) N	Q6(1-7) %	Q1+Q6 N	Q1+Q6 %	D:Q1-Q6 %	DESIRED BY ALL SUPERVISORS Q2(+) N	Q2(+) %	D:Q1-Q2 %
136	49	81.7	52	86.7	101	84.2	-5.0	72	97.3	-15.6
137	38	63.3	47	78.3	85	70.8	-15.0	57	77.0	-13.7
138	47	78.3	50	83.3	97	80.8	-5.0	69	93.2	-14.9
139	46	76.7	50	83.3	96	80.0	-6.7	69	93.2	-16.6
140	54	90.0	53	89.8	107	89.9	0.2	73	98.6	-8.6
141	49	81.7	53	88.3	102	85.0	-6.7	71	95.9	-14.3
142	44	73.3	40	66.7	84	70.0	6.7	62	83.8	-10.5
143	53	88.3	56	93.3	109	90.8	-5.0	74	100.0	-11.7
144	51	85.0	52	86.7	103	85.8	-1.7	70	94.6	-9.6
145	52	86.7	54	90.0	106	88.3	-3.3	74	100.0	-13.3
146	49	81.7	55	91.7	104	86.7	-10.0	69	93.2	-11.6
147	51	85.0	56	93.3	107	89.2	-8.3	71	95.9	-10.9
148	46	76.7	51	85.0	97	80.8	-8.3	69	93.2	-16.6
149	45	75.0	51	85.0	96	80.0	-10.0	67	90.5	-15.5
150	52	86.7	54	91.5	106	89.1	-4.9	74	100.0	-13.3
151	49	81.7	54	90.0	103	85.8	-8.3	70	94.6	-12.9
152	47	78.3	50	83.3	97	80.8	-5.0	69	93.2	-14.9
153	33	55.0	39	65.0	72	60.0	-10.0	49	66.2	-11.2
154	23	38.3	32	53.3	55	45.8	-15.0	34	45.9	-7.6
155	55	91.7	57	95.0	112	93.3	-3.3	73	98.6	-7.0
156	50	83.3	51	85.0	101	84.2	-1.7	71	95.9	-12.6
157	42	70.0	50	83.3	92	76.7	-13.3	67	90.5	-20.5
158	45	75.0	49	81.7	94	78.3	-6.7	69	93.2	-18.2
159	39	65.0	46	76.7	85	70.8	-11.7	61	82.4	-17.4
160	55	91.7	56	93.3	111	92.5	-1.7	74	100.0	-8.3
161	11	18.3	13	21.7	24	20.0	-3.3	15	20.3	-1.9
162	56	93.3	56	93.3	112	93.3	0.0	73	98.6	-5.3
163	56	93.3	56	93.3	112	93.3	0.0	73	98.6	-5.3
164	34	56.7	35	58.3	69	57.5	-1.7	46	62.2	-5.5
165	16	26.7	19	31.7	35	29.2	-5.0	23	31.1	-4.4
166	54	90.0	56	93.3	110	91.7	-3.3	71	95.9	-5.9
167	34	56.7	32	53.3	66	55.0	3.3	50	67.6	-10.9
168	55	91.7	51	85.0	106	88.3	6.7	72	97.3	-5.6
169	55	91.7	55	91.7	110	91.7	0.0	73	98.6	-7.0
170	53	88.3	49	81.7	102	85.0	6.7	72	97.3	-9.0

107

TASK	PERFORMED BY WORKERS Q1(+) N	Q1(+) %	Q6(1-7) N	Q6(1-7) %	Q1+Q6 N	Q1+Q6 %	D:Q1-Q6 %	DESIRED BY ALL SUPERVISORS Q2(+) N	Q2(+) %	D:Q1-Q2 %
171	50	83.3	52	86.7	102	85.0	-3.3	68	91.9	-8.6
172	33	55.0	32	53.3	65	54.2	1.7	50	67.6	-12.6
173	50	83.3	53	88.3	103	85.8	-5.0	71	95.9	-12.6
174	22	36.7	30	50.0	52	43.3	-13.3	37	50.0	-13.3
175	44	73.3	46	76.7	90	75.0	-3.3	70	94.6	-21.3
176	37	61.7	42	71.2	79	66.4	-9.5	58	78.4	-16.7
177	51	85.0	48	80.0	99	82.5	5.0	69	93.2	-8.2
178	48	80.0	43	71.7	91	75.8	8.3	66	89.2	-9.2
179	53	88.3	49	81.7	102	85.0	6.7	72	97.3	-9.0
180	35	58.3	37	61.7	72	60.0	-3.3	54	73.0	-14.6
181	52	86.7	54	91.5	106	89.1	-4.9	72	97.3	-10.6
182	50	83.3	54	90.0	104	86.7	-6.7	72	97.3	-14.0
183	49	81.7	54	90.0	103	85.8	-8.3	73	98.6	-17.0
184	50	83.3	53	88.3	103	85.8	-5.0	72	97.3	-14.0
185	53	88.3	49	81.7	102	85.0	6.7	70	94.6	-6.3
186	51	85.0	50	83.3	101	84.2	1.7	70	94.6	-9.6
187	53	88.3	55	91.7	108	90.0	-3.3	73	98.6	-10.3
188	54	90.0	56	93.3	110	91.7	-3.3	73	98.6	-8.6
189	53	88.3	55	91.7	108	90.0	-3.3	72	97.3	-9.0
190	53	88.3	53	88.3	106	88.3	0.0	73	98.6	-10.3
191	52	86.7	52	88.1	104	87.4	-1.5	70	94.6	-7.9
192	5	8.3	17	28.3	22	18.3	-20.0	15	20.3	-11.9
193	7	11.7	23	38.3	30	25.0	-26.7	18	24.3	-12.7
194	36	60.0	42	70.0	78	65.0	-10.0	56	75.7	-15.7
195	48	80.0	54	90.0	102	85.0	-10.0	64	86.5	-6.5
196	51	85.0	54	90.0	105	87.5	-5.0	66	89.2	-4.2
197	52	86.7	52	88.1	104	87.4	-1.5	70	94.6	-7.9
198	47	78.3	53	88.3	100	83.3	-10.0	67	90.5	-12.2
199	43	71.7	51	85.0	94	78.3	-13.3	66	89.2	-17.5
200	42	70.0	45	75.0	87	72.5	-5.0	62	83.8	-13.8
201	28	46.7	46	76.7	74	61.7	-30.0	39	52.7	-6.0
202	33	55.0	44	73.3	77	64.2	-18.3	63	85.1	-30.1
203	38	63.3	41	69.5	79	66.4	-6.2	61	82.4	-19.1
204	44	73.3	48	80.0	92	76.7	-6.7	67	90.5	-17.2
205	35	58.3	45	75.0	80	66.7	-16.7	63	85.1	-26.8

TASK	PERFORMED BY WORKERS: Q1(+) N	Q1(+) %	Q6(1-7) N	Q6(1-7) %	Q1+Q6 N	Q1+Q6 %	D:Q1-Q6 %	DESIRED BY ALL SUPERVISORS: Q2(+) N	Q2(+) %	D:Q1-Q2 %
206	44	73.3	53	88.3	97	80.8	-15.0	66	89.2	-15.9
207	43	71.7	50	83.3	93	77.5	-11.7	67	90.5	-18.9
208	45	75.0	51	85.0	96	80.0	-10.0	67	90.5	-15.5
209	51	85.0	57	95.0	108	90.0	-10.0	72	97.3	-12.3
210	47	78.3	55	91.7	102	85.0	-13.3	70	94.6	-16.3
211	46	76.7	52	86.7	98	81.7	-10.0	67	90.5	-13.9
212	57	95.0	53	91.4	110	93.2	3.6	70	94.6	0.4
213	56	93.3	55	91.7	111	92.5	1.7	72	97.3	-4.0
214	50	83.3	52	86.7	102	85.0	-3.3	67	90.5	-7.2
215	54	90.0	52	86.7	106	88.3	3.3	72	97.3	-7.3
216	56	93.3	56	93.3	112	93.3	0.0	73	98.6	-5.3
217	57	95.0	52	86.7	109	90.8	8.3	72	97.3	-2.3
218	55	91.7	55	91.7	110	91.7	0.0	72	97.3	-5.6
219	56	93.3	55	91.7	111	92.5	1.7	72	97.3	-4.0
220	56	93.3	54	90.0	110	91.7	3.3	72	97.3	-4.0
221	57	95.0	55	91.7	112	93.3	3.3	72	97.3	-2.3
222	49	81.7	52	86.7	101	84.2	-5.0	71	95.9	-14.3
223	55	91.7	55	91.7	110	91.7	0.0	73	98.6	-7.0
224	56	93.3	56	93.3	112	93.3	0.0	71	95.9	-2.6
225	57	95.0	55	91.7	112	93.3	3.3	73	98.6	-3.6
226	54	90.0	53	88.3	107	89.2	1.7	72	97.3	-7.3
227	48	80.0	55	91.7	103	85.8	-11.7	68	91.9	-11.9
228	54	90.0	53	88.3	107	89.2	1.7	69	93.2	-3.2
229	58	96.7	56	93.3	114	95.0	3.3	71	95.9	0.7
230	58	96.7	57	95.0	115	95.8	1.7	73	98.6	-2.0
231	46	76.7	51	85.0	97	80.8	-8.3	63	85.1	-8.5
232	52	86.7	56	93.3	108	90.0	-6.7	71	95.9	-9.3
233	56	93.3	56	93.3	112	93.3	0.0	70	94.6	-1.3
234	57	95.0	53	88.3	110	91.7	6.7	72	97.3	-2.3
235	56	93.3	53	88.3	109	90.8	5.0	70	94.6	-1.3
236	58	96.7	56	93.3	114	95.0	3.3	72	97.3	-0.6
237	57	95.0	55	91.7	112	93.3	3.3	73	98.6	-3.6
238	58	96.7	56	93.3	114	95.0	3.3	72	97.3	-0.6
239	57	95.0	55	91.7	112	93.3	3.3	73	98.6	-3.6
240	57	95.0	57	95.0	114	95.0	0.0	72	97.3	-2.3

TASK	PERFORMED BY WORKERS: Q1(+) N	Q1(+) %	Q6(1-7) N	Q6(1-7) %	Q1+Q6 N	Q1+Q6 %	D:Q1-Q6 %	DESIRED BY ALL SUPERVISORS: Q2(+) N	Q2(+) %	D:Q1-Q2 %
241	56	93.3	57	95.0	113	94.2	-1.7	72	97.3	-4.0
242	57	95.0	57	95.0	114	95.0	0.0	73	98.6	-3.6
243	53	88.3	53	88.3	106	88.3	0.0	68	91.9	-3.6
244	57	95.0	56	93.3	113	94.2	1.7	73	98.6	-3.6
245	44	73.3	49	81.7	93	77.5	-8.3	58	78.4	-5.0
246	37	61.7	35	58.3	72	60.0	3.3	50	67.6	-5.9
247	57	95.0	55	91.7	112	93.3	3.3	71	95.9	-0.9
248	53	88.3	52	86.7	105	87.5	1.7	67	90.5	-2.2
249	57	95.0	55	93.2	112	94.1	1.8	73	98.6	-3.6
250	24	40.0	39	66.1	63	52.9	-26.1	46	62.2	-22.2
251	50	83.3	55	91.7	105	87.5	-8.3	63	85.1	-1.8
252	14	23.3	29	48.3	43	35.8	-25.0	28	37.8	-14.5
253	55	91.7	54	90.0	109	90.8	1.7	71	95.9	-4.3
254	56	93.3	58	96.7	114	95.0	-3.3	73	98.6	-5.3
255	57	95.0	55	91.7	112	93.3	3.3	73	98.6	-3.6
256	57	95.0	58	96.7	115	95.8	-1.7	73	98.6	-3.6
257	56	93.3	58	96.7	114	95.0	-3.3	73	98.6	-5.3
258	56	93.3	54	90.0	110	91.7	3.3	72	97.3	-4.0
259	51	85.0	52	86.7	103	85.8	-1.7	67	90.5	-5.5
260	24	40.0	41	69.5	65	54.6	-29.5	48	64.9	-24.9
261	50	83.3	52	86.7	102	85.0	-3.3	71	95.9	-12.6
262	54	90.0	55	91.7	109	90.8	-1.7	71	95.9	-5.9
263	56	93.3	58	96.7	114	95.0	-3.3	72	97.3	-4.0
264	15	25.0	37	61.7	52	43.3	-36.7	39	52.7	-27.7
265	8	13.3	28	46.7	36	30.0	-33.3	28	37.8	-24.5
266	15	25.0	33	55.0	48	40.0	-30.0	34	45.9	-20.9
267	13	21.7	31	51.7	44	36.7	-30.0	33	44.6	-22.9
268	55	91.7	57	95.0	112	93.3	-3.3	69	93.2	-1.6
269	7	11.7	31	51.7	38	31.7	-40.0	25	33.8	-22.1
270	55	91.7	54	90.0	109	90.8	1.7	72	97.3	-5.6
271	52	86.7	53	88.3	105	87.5	-1.7	73	98.6	-12.0
272	8	13.3	19	31.7	27	22.5	-18.3	22	29.7	-16.4
273	38	63.3	42	71.2	80	67.2	-7.9	56	75.7	-12.3
274	50	83.3	56	93.3	106	88.3	-10.0	64	86.5	-3.2
275	57	95.0	52	86.7	109	90.8	8.3	72	97.3	-2.3

	PERFORMED BY WORKERS							DESIRED BY ALL SUPERVISORS		
	Q1(+)		Q6(1-7)		Q1+Q6		D:Q1-Q6	Q2(+)		D:Q1-Q2
TASK	N	%	N	%	N	%	%	N	%	%
276	51	85.0	55	91.7	106	88.3	-6.7	68	91.9	-6.9
277	56	93.3	52	86.7	108	90.0	6.7	69	93.2	0.1
278	44	73.3	49	81.7	93	77.5	-8.3	65	87.8	-14.5
279	52	86.7	53	88.3	105	87.5	-1.7	68	91.9	-5.2
280	25	41.7	35	59.3	60	50.4	-17.7	40	54.1	-12.4
281	57	95.0	56	93.3	113	94.2	1.7	72	97.3	-2.3
282	56	93.3	50	83.3	106	88.3	10.0	72	97.3	-4.0
283	51	85.0	50	83.3	101	84.2	1.7	68	91.9	-6.9
284	56	93.3	56	93.3	112	93.3	0.0	72	97.3	-4.0
285	57	95.0	55	91.7	112	93.3	3.3	72	97.3	-2.3
286	53	88.3	52	86.7	105	87.5	1.7	68	91.9	-3.6
287	56	93.3	53	88.3	109	90.8	5.0	72	97.3	-4.0
288	45	75.0	40	66.7	85	70.8	8.3	57	77.0	-2.0
289	56	93.3	53	88.3	109	90.8	5.0	72	97.3	-4.0
290	57	95.0	55	91.7	112	93.3	3.3	72	97.3	-2.3
291	48	80.0	51	86.4	99	83.2	-6.4	68	91.9	-11.9
292	40	66.7	47	81.0	87	73.7	-14.4	65	87.8	-21.2
293	51	85.0	52	89.7	103	87.3	-4.7	72	97.3	-12.3
294	43	71.7	42	71.2	85	71.4	0.5	57	77.0	-5.4
295	46	76.7	50	83.3	96	80.0	-6.7	68	91.9	-15.2
296	33	55.0	41	68.3	74	61.7	-13.3	57	77.0	-22.0
297	47	78.3	54	90.0	101	84.2	-11.7	71	95.9	-17.6
298	44	73.3	49	81.7	93	77.5	-8.3	67	90.5	-17.2
299	44	73.3	50	83.3	94	78.3	-10.0	69	93.2	-19.9
300	31	51.7	39	66.1	70	58.8	-14.4	48	64.9	-13.2
301	54	90.0	59	98.3	113	94.2	-8.3	69	93.2	-3.2
302	38	63.3	41	68.3	79	65.8	-5.0	63	85.1	-21.8
303	39	65.0	44	74.6	83	69.7	-9.6	67	90.5	-25.5
304	24	40.0	40	66.7	64	53.3	-26.7	56	75.7	-35.7
305	57	95.0	57	95.0	114	95.0	0.0	73	98.6	-3.6
306	56	93.3	56	93.3	112	93.3	0.0	73	98.6	-5.3
307	41	68.3	47	79.7	88	73.9	-11.3	63	85.1	-16.8
308	54	90.0	56	93.3	110	91.7	-3.3	73	98.6	-8.6
309	53	88.3	56	93.3	109	90.8	-5.0	72	97.3	-9.0
310	16	26.7	35	58.3	51	42.5	-31.7	33	44.6	-17.9

TASK	PERFORMED BY WORKERS: Q1(+) N	Q1(+) %	Q6(1-7) N	Q6(1-7) %	Q1+Q6 N	Q1+Q6 %	D:Q1-Q6 %	DESIRED BY ALL SUPERVISORS: Q2(+) N	Q2(+) %	D:Q1-Q2 %
311	52	86.7	53	88.3	105	87.5	-1.7	73	98.6	-12.0
312	37	61.7	48	81.4	85	71.4	-19.7	62	83.8	-22.1
313	42	70.0	51	85.0	93	77.5	-15.0	63	85.1	-15.1
314	21	35.0	39	65.0	60	50.0	-30.0	41	55.4	-20.4
315	52	86.7	51	85.0	103	85.8	1.7	70	94.6	-7.9
316	55	91.7	56	93.3	111	92.5	-1.7	73	98.6	-7.0
317	29	48.3	43	71.7	72	60.0	-23.3	47	63.5	-15.2
318	35	58.3	45	75.0	80	66.7	-16.7	48	64.9	-6.5
319	18	30.0	36	60.0	54	45.0	-30.0	34	45.9	-15.9
320	50	83.3	53	88.3	103	85.8	-5.0	72	97.3	-14.0
321	53	88.3	55	91.7	108	90.0	-3.3	72	97.3	-9.0
322	46	76.7	52	86.7	98	81.7	-10.0	71	95.9	-19.3
323	41	68.3	50	83.3	91	75.8	-15.0	69	93.2	-24.9
324	51	85.0	54	90.0	105	87.5	-5.0	73	98.6	-13.6
325	44	73.3	50	84.7	94	79.0	-11.4	65	87.8	-14.5
326	53	88.3	54	90.0	107	89.2	-1.7	73	98.6	-10.3
327	52	86.7	55	91.7	107	89.2	-5.0	73	98.6	-12.0
328	54	90.0	55	91.7	109	90.8	-1.7	73	98.6	-8.6
329	52	86.7	54	90.0	106	88.3	-3.3	73	98.6	-12.0
330	32	53.3	45	75.0	77	64.2	-21.7	58	78.4	-25.0
331	38	63.3	44	74.6	82	68.9	-11.2	60	81.1	-17.7
332	54	90.0	55	91.7	109	90.8	-1.7	72	97.3	-7.3
333	44	73.3	51	85.0	95	79.2	-11.7	66	89.2	-15.9
334	34	56.7	45	76.3	79	66.4	-19.6	62	83.8	-27.1
335	22	36.7	34	56.7	56	46.7	-20.0	40	54.1	-17.4
336	20	33.3	45	76.3	65	54.6	-42.9	49	66.2	-32.9
337	55	91.7	55	91.7	110	91.7	0.0	72	97.3	-5.6
338	44	73.3	53	88.3	97	80.8	-15.0	67	90.5	-17.2
339	51	85.0	52	86.7	103	85.8	-1.7	71	95.9	-10.9
340	48	80.0	51	85.0	99	82.5	-5.0	70	94.6	-14.6
341	48	80.0	57	95.0	105	87.5	-15.0	71	95.9	-15.9
342	36	60.0	46	76.7	82	68.3	-16.7	61	82.4	-22.4
343	41	68.3	50	83.3	91	75.8	-15.0	65	87.8	-19.5
344	44	73.3	50	83.3	94	78.3	-10.0	67	90.5	-17.2
345	54	90.0	55	91.7	109	90.8	-1.7	71	95.9	-5.9

	PERFORMED BY WORKERS							DESIRED BY ALL SUPERVISORS		
	Q1(+)		Q6(1-7)		Q1+Q6		D:Q1-Q6	Q2(+)		D:Q1-Q2
TASK	N	%	N	%	N	%	%	N	%	%
346	40	66.7	52	86.7	92	76.7	-20.0	67	90.5	-23.9
347	51	85.0	57	95.0	108	90.0	-10.0	72	97.3	-12.3
348	31	51.7	37	62.7	68	57.1	-11.0	59	79.7	-28.1
349	32	53.3	37	62.7	69	58.0	-9.4	59	79.7	-26.4
350	23	38.3	30	51.7	53	44.9	-13.4	52	70.3	-31.9
351	30	50.0	37	62.7	67	56.3	-12.7	59	79.7	-29.7
352	34	56.7	37	62.7	71	59.7	-6.0	59	79.7	-23.1
353	32	53.3	35	59.3	67	56.3	-6.0	53	71.6	-18.3
354	26	43.3	28	47.5	54	45.4	-4.1	49	66.2	-22.9
355	26	43.3	34	57.6	60	50.4	-14.3	56	75.7	-32.3
356	27	45.0	35	59.3	62	52.1	-14.3	59	79.7	-34.7
357	34	56.7	40	67.8	74	62.2	-11.1	61	82.4	-25.8
358	26	43.3	36	61.0	62	52.1	-17.7	58	78.4	-35.0
359	29	48.3	36	61.0	65	54.6	-12.7	57	77.0	-28.7
360	29	48.3	35	59.3	64	53.8	-11.0	58	78.4	-30.0
361	23	38.3	35	59.3	58	48.7	-21.0	56	75.7	-37.3
362	34	56.7	43	72.9	77	64.7	-16.2	59	79.7	-23.1
363	55	91.7	54	90.0	109	90.8	1.7	70	94.6	-2.9
364	54	90.0	54	90.0	108	90.0	0.0	70	94.6	-4.6
365	52	86.7	53	88.3	105	87.5	-1.7	69	93.2	-6.6
366	53	88.3	53	88.3	106	88.3	0.0	69	93.2	-4.9
367	52	86.7	49	83.1	101	84.9	3.6	68	91.9	-5.2
368	53	88.3	54	90.0	107	89.2	-1.7	68	91.9	-3.6
369	39	65.0	37	63.8	76	64.4	1.2	55	74.3	-9.3
370	15	25.0	25	43.1	40	33.9	-18.1	23	31.1	-6.1
371	49	81.7	51	85.0	100	83.3	-3.3	70	94.6	-12.9
372	17	28.3	32	53.3	49	40.8	-25.0	39	52.7	-24.4
373	44	73.3	48	81.4	92	77.3	-8.0	67	90.5	-17.2
374	37	61.7	47	78.3	84	70.0	-16.7	57	77.0	-15.4
375	39	65.0	48	80.0	87	72.5	-15.0	58	78.4	-13.4
376	37	61.7	44	73.3	81	67.5	-11.7	51	68.9	-7.3
377	32	53.3	42	70.0	74	61.7	-16.7	54	73.0	-19.6
378	17	28.3	24	40.0	41	34.2	-11.7	43	58.1	-29.8
379	9	15.0	17	28.3	26	21.7	-13.3	33	44.6	-29.6
380	46	76.7	47	78.3	93	77.5	-1.7	69	93.2	-16.6

Table C-2

Task Importance (Q8 and Q9)[a]

Question 8: Task Importance to Job (Workers)

What degree of importance would you assign to each job activity you perform? Judge the importance of each activity in regard to its contribution to effective operations in your shop or garage.

Categories and Values of the Response Scale:

1 = Low importance (relatively unimportant part of the job)
2 = Moderate importance (important but not essential).
3 = High importance (essential part of the job that decisively influences the effectiveness of the shop or garage operations).

Question 9: Task Importance to Job (Supervisors)

Based upon your supervisory experience in your present operations, what degree of importance would you assign to each job activity that is appropriate for your Automotive Mechanics? Judge the importance of each activity in regard to its contribution to effective operations in your shop or garage.

Categories and Values of the Response Scale: Identical to those of Question 8.

Each of the 22 columns of Table C-2 is identified below.

Column 11:	Average (mean) of worker ratings, considering only those who checked (Question 1) that the task was performed.
Column 12:	Standard deviation showing degree of response variability.
Column 13:	Number of workers who rated the task 1-3 (Question 8).
Column 14, 15 and 16:	Average, standard deviation, and number of supervisors who rated the task (Question 9), considering only those who checked (Question 2) that the task should be performed.
Column 17:	Difference between worker and supervisor average ratings (Column 11 minus Column 14).

[a]Questions 8 and 9 were answered only for those tasks checked on Q1 or Q2.

Table C-2-continued

Columns 18 through 24:	Same as Columns 11 through 17, except the average ratings were computed across all persons in each group. Persons not checking the task (Questions 1 or 2) were included in the average by considering their rating to be a value of "0".

Note: The Column 18-24 summaries may be of value in providing greater comparability with Question 6 ratings as given in Table C-3. Columns 18-24 denote a task's rating with respect to job importance for the entire occupation that is represented in the survey. On the other hand, columns 11-17 denote a task's job importance only in regard to those in an occupation who do or should perform that task, Thus, a task might only be required of a very few workers but for them it could be highly important. Extremely difficult tasks, involving great skill and experience, could be of this nature.

Columns 25, 26, 27, and 28:	Number of surveyed workers using each level of the importance scale. Column 25 (None) is the complement of the number of workers checking the task on Question 1, as recorded in Column 1 on Table C-1.
Columns 29 through 32:	Same as Columns 25 through 28, but for supervisors' ratings. Column 29 (None) is the complement of that portion of Column 8 (Table C-1) represented by the 35 supervisors in Group 1.

TASK INVENTORY DATA SUMMARY
AUTO MECHANICS -- COMPOSITE

TABLE 2: TASK IMPORTANCE
(Q8 & Q9)

TASK	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK: WORKERS MEAN	WORKERS SD	WORKERS N	SUPERVISORS MEAN	SUPERVISORS SD	SUPERVISORS N	D:W-S MEAN	ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS: WORKERS MEAN	WORKERS SD	WORKERS N	SUPERVISORS MEAN	SUPERVISORS SD	SUPERVISORS N	D:W-S MEAN	DISTRIBUTION OF WORKER RESPONSES: NONE	LOW	MED	HIGH	DISTRIBUTION OF SUPERVISOR RESPONSES: NONE	LOW	MED	HIGH
1	2.1	0.8	7	2.3	0.9	7	-0.1	0.3	0.7	59	0.5	1.1	30	-0.3	52	2	2	3	23	2	1	4
2	2.5	0.5	2	2.3	0.9	3	0.2	0.1	0.5	59	0.2	0.7	32	-0.1	57	0	1	1	29	1	0	2
3	2.5	0.7	19	2.8	0.5	21	-0.3	0.8	1.2	59	1.9	1.4	31	-1.1	40	2	6	11	10	1	2	18
4	2.5	0.5	10	2.6	0.6	18	-0.1	0.4	1.0	58	1.5	1.3	30	-1.1	48	0	5	5	12	1	6	11
5	2.0	0.0	1	2.0	1.0	2	0.0	0.0	0.3	59	0.1	0.5	33	-0.1	58	0	1	0	31	1	0	1
6	2.4	0.6	14	2.4	0.9	17	0.1	0.6	1.1	59	1.3	1.3	31	-0.7	45	1	6	7	14	5	1	11
7	2.6	0.5	5	2.3	0.7	9	0.3	0.2	0.7	59	0.7	1.1	32	-0.4	54	0	2	5	23	1	4	4
8	2.8	0.4	5	1.9	0.6	7	0.9	0.2	0.8	59	0.4	0.8	32	-0.2	54	0	1	4	25	2	4	1
9	0.0	0.0	0	2.6	0.7	10	-2.6	0.0	0.0	59	0.8	1.2	33	-0.8	59	0	0	0	23	1	2	7
10	2.5	0.7	11	2.3	0.9	15	0.2	0.5	1.0	59	1.1	1.3	32	-0.6	48	1	4	6	17	4	3	8
11	1.8	0.4	5	2.4	0.8	9	-0.6	0.2	0.5	59	0.7	1.2	32	-0.5	54	1	4	0	23	2	1	6
12	2.5	0.9	4	2.5	0.8	10	0.0	0.2	0.7	59	0.8	1.3	31	-0.6	55	1	0	3	21	2	1	7
13	2.5	0.5	8	2.2	0.8	13	0.3	0.3	0.9	59	0.9	1.2	32	-0.6	51	0	4	4	19	3	4	6
14	2.6	0.7	28	2.9	0.3	26	-0.3	1.3	1.4	56	2.3	1.2	32	-1.1	28	4	4	20	6	0	3	23
15	2.2	0.7	24	2.5	0.8	19	-0.3	0.9	1.2	58	1.6	1.3	30	-0.7	34	5	10	9	11	3	4	12
16	3.0	0.0	1	2.3	0.8	4	0.8	0.1	0.4	59	0.3	0.8	31	-0.2	58	0	0	1	27	1	1	2
17	2.1	0.8	7	2.1	0.9	8	0.0	0.3	0.7	59	0.5	1.0	31	-0.3	52	2	2	3	23	3	1	4
18	2.7	0.5	10	2.6	0.6	12	0.1	0.5	1.0	59	1.0	1.3	30	-0.6	49	0	3	7	18	1	3	8
19	2.5	0.5	2	1.9	1.0	9	0.6	0.1	0.5	59	0.6	1.0	30	-0.5	57	0	1	1	21	5	0	4
20	2.5	0.5	4	1.6	0.7	8	0.9	0.2	0.6	59	0.4	0.8	31	-0.2	55	0	2	2	23	4	3	1
21	2.5	0.5	2	2.8	0.7	8	-0.3	0.1	0.5	59	0.7	1.2	32	-0.6	57	0	1	1	24	1	0	7
22	2.7	0.5	6	2.0	0.8	18	0.7	0.3	0.8	58	1.2	1.2	31	-0.9	52	0	2	4	13	6	6	6
23	3.0	0.0	2	1.7	0.7	9	1.3	0.1	0.5	59	0.5	0.8	31	-0.4	57	0	0	2	22	4	4	1
24	2.5	0.5	4	1.5	0.6	13	1.0	0.2	0.6	59	0.6	0.8	32	-0.4	55	0	2	2	19	8	4	1
25	3.0	0.0	5	2.5	0.8	12	0.5	0.3	0.8	59	1.0	1.3	31	-0.7	54	0	0	5	19	2	2	8
26	2.7	0.5	3	2.2	1.0	5	0.5	0.1	0.6	59	0.4	0.9	31	-0.2	56	0	1	2	26	2	0	3
27	2.4	0.6	16	2.7	0.6	20	-0.3	0.7	1.1	57	1.7	1.4	31	-1.1	41	1	8	7	11	2	2	16
28	2.6	0.5	7	2.3	0.4	8	0.3	0.3	0.8	59	0.6	1.0	31	-0.3	52	0	3	4	22	0	6	2
29	3.0	0.0	7	2.4	0.8	18	0.6	0.4	1.0	59	1.4	1.2	31	-1.0	52	0	0	7	13	3	5	10
30	3.0	0.0	1	1.8	0.7	8	1.3	0.1	0.4	59	0.4	0.8	32	-0.4	58	0	0	1	24	3	4	1

110

	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK							ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS							DISTRIBUTION OF WORKER RESPONSES				DISTRIBUTION OF SUPERVISOR RESPONSES			
	WORKERS			SUPERVISORS			D:W-S	WORKERS			SUPERVISORS			D:W-S								
TASK	MEAN	SD	N	MEAN	SD	N	MEAN	MEAN	SD	N	MEAN	SD	N	MEAN	NONE	LOW	MED	HIGH	NONE	LOW	MED	HIGH
31	0.0	0.0	0	1.1	0.3	7	-1.1	0.0	0.0	59	0.3	0.5	32	-0.3	59	0	0	0	25	6	1	0
32	2.6	0.5	7	2.3	0.8	14	0.3	0.3	0.8	59	1.0	1.3	31	-0.7	52	0	3	4	17	3	4	7
33	2.6	0.5	10	2.6	0.7	16	0.0	0.4	1.0	59	1.4	1.4	29	-1.0	49	0	4	6	13	2	3	11
34	2.2	0.4	5	2.3	0.7	12	-0.1	0.2	0.6	59	0.9	1.2	30	-0.7	54	0	4	1	18	2	4	6
35	2.3	0.5	3	2.4	0.8	9	-0.1	0.1	0.5	59	0.7	1.2	32	-0.6	56	0	2	1	23	2	1	6
36	0.0	0.0	0	2.0	0.7	4	-2.0	0.0	0.0	59	0.3	0.7	32	-0.3	59	0	0	0	28	1	2	1
37	2.5	0.5	2	1.8	0.8	4	0.8	0.1	0.5	59	0.2	0.6	32	-0.1	57	0	1	1	28	2	1	1
38	0.0	0.0	0	1.8	0.7	8	-1.8	0.0	0.0	59	0.4	0.8	32	-0.4	59	0	0	0	24	3	4	1
39	2.8	0.4	5	2.0	0.6	5	0.8	0.2	0.8	59	0.3	0.8	29	-0.1	54	0	1	4	24	1	3	1
40	2.3	0.9	15	2.3	0.7	23	0.0	0.6	1.1	59	1.7	1.1	31	-1.1	44	5	1	9	8	3	11	9
41	2.3	0.7	8	2.1	0.6	14	0.1	0.3	0.8	59	1.0	1.1	31	-0.7	51	1	4	3	17	2	8	4
42	2.0	0.4	10	1.8	0.4	10	0.2	0.3	0.8	59	0.6	0.9	32	-0.2	49	1	8	1	22	2	8	0
43	2.2	0.4	5	1.7	0.7	17	0.5	0.2	0.6	58	0.9	1.0	31	-0.7	53	0	4	1	14	8	6	3
44	2.6	0.6	17	2.8	0.6	22	-0.2	0.7	1.2	59	2.0	1.7	30	-1.3	42	1	5	11	8	2	1	19
45	2.0	0.7	4	1.4	0.6	16	0.6	0.1	0.5	59	0.7	0.8	31	-0.6	55	1	2	1	15	10	5	1
46	2.5	0.5	6	2.3	0.8	16	0.2	0.3	0.8	58	1.2	1.3	30	-1.0	52	0	3	3	14	4	3	9
47	2.0	0.0	1	2.0	0.8	6	0.0	0.0	0.3	59	0.4	0.9	32	-0.3	58	0	1	0	26	2	2	2
48	2.8	0.4	4	2.3	0.8	12	0.4	0.2	0.7	59	0.9	1.3	31	-0.7	55	0	1	3	19	3	2	7
49	2.2	0.7	6	2.5	0.7	16	-0.3	0.2	0.7	57	1.3	1.3	30	-1.1	51	1	3	2	14	2	4	10
50	1.0	0.0	1	1.7	0.9	3	-0.7	0.0	0.1	59	0.2	0.6	32	-0.1	58	1	0	0	29	2	0	1
51	2.0	0.7	4	2.3	0.9	11	-0.3	0.1	0.5	59	0.8	1.2	32	-0.6	55	1	2	1	21	3	2	6
52	2.7	0.5	43	2.9	0.3	27	-0.2	2.1	1.2	57	2.5	1.0	31	-0.5	14	1	10	32	4	0	2	25
53	2.7	0.6	13	2.3	0.8	16	0.4	0.6	1.2	58	1.2	1.2	31	-0.6	45	1	2	10	15	3	6	7
54	2.5	0.7	32	2.5	0.6	21	-0.1	1.3	1.3	59	1.7	1.3	32	-0.3	27	4	9	19	11	1	8	12
55	0.0	0.0	0	1.9	0.6	7	-1.9	0.0	0.0	59	0.4	0.8	31	-0.4	59	0	0	0	24	2	4	1
56	2.8	0.4	16	2.6	0.6	16	0.2	0.8	1.3	58	1.4	1.4	31	-0.6	42	0	3	13	15	1	4	11
57	2.3	0.8	24	2.6	0.6	19	-0.4	0.9	1.2	58	1.6	1.4	31	-0.7	34	5	8	11	12	1	5	13
58	3.0	0.0	1	2.2	0.6	13	0.8	0.1	0.4	59	0.9	1.2	32	-0.9	58	0	0	1	19	3	4	6
59	2.5	0.5	4	2.3	0.8	10	0.2	0.2	0.6	59	0.8	1.2	30	-0.6	55	0	2	2	20	2	3	5
60	2.4	0.5	7	2.3	0.7	15	0.1	0.3	0.8	59	1.1	1.3	31	-0.8	52	0	4	3	16	2	6	7
61	3.0	0.0	1	2.4	0.7	10	0.6	0.1	0.4	59	0.8	1.2	32	-0.7	58	0	0	1	22	1	4	5
62	2.7	0.5	3	2.0	0.7	13	0.7	0.1	0.6	59	0.9	1.1	30	-0.7	56	0	1	2	17	3	7	3
63	2.4	0.5	7	2.3	0.6	13	0.1	0.3	0.8	59	1.0	1.2	30	-0.7	52	0	4	3	17	1	7	5
64	2.4	0.7	22	2.5	0.6	17	-0.1	0.9	1.2	58	1.3	1.3	32	-0.4	36	2	9	11	15	1	7	9
65	2.5	0.6	18	2.5	0.6	13	0.0	0.8	1.2	59	1.0	1.3	31	-0.3	41	1	7	10	18	1	5	7

TASK	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK: WORKERS MEAN	WORKERS SD	WORKERS N	SUPERVISORS MEAN	SUPERVISORS SD	SUPERVISORS N	D:W-S MEAN	ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS: WORKERS MEAN	WORKERS SD	WORKERS N	SUPERVISORS MEAN	SUPERVISORS SD	SUPERVISORS N	D:W-S MEAN	DISTRIBUTION OF WORKER RESPONSES: NONE	LOW	MED	HIGH	DISTRIBUTION OF SUPERVISOR RESPONSES: NONE	LOW	MED	HIGH
66	2.0	0.8	21	1.6	0.7	8	0.3	0.7	1.0	59	0.4	0.8	33	0.3	38	7	8	6	25	4	3	1
67	2.3	0.7	47	2.5	0.6	28	-0.1	1.9	1.1	58	2.1	1.0	33	-0.2	11	6	19	22	5	1	13	14
68	2.4	0.8	44	2.5	0.6	28	-0.1	1.9	1.2	55	2.3	0.9	31	-0.4	11	8	11	25	3	1	11	16
69	2.1	0.8	33	2.1	0.8	25	-0.0	1.2	1.2	57	1.7	1.1	32	-0.4	24	9	12	12	7	6	10	9
70	2.0	0.8	3	2.1	0.6	7	-0.1	0.1	0.5	59	0.5	0.9	32	-0.4	56	1	1	1	25	1	4	2
71	2.3	0.8	10	2.6	0.6	13	-0.3	0.4	0.9	57	1.1	1.3	32	-0.7	47	2	3	5	19	1	3	9
72	2.6	0.6	38	2.7	0.5	25	-0.1	1.7	1.3	57	2.1	1.3	33	-0.3	19	3	10	25	8	1	5	19
73	1.0	0.0	1	2.0	0.8	3	-1.0	0.0	0.1	59	0.2	0.6	33	-0.2	58	1	0	0	30	1	1	1
74	2.1	0.8	11	2.2	0.7	14	-0.1	0.4	0.9	59	1.0	1.2	32	-0.6	48	3	4	4	18	2	7	5
75	2.3	0.7	6	2.3	0.7	12	0.0	0.2	0.7	59	0.9	1.2	32	-0.6	53	1	2	3	20	2	4	6
76	0.0	0.0	0	2.1	0.7	11	-2.1	0.0	0.0	59	0.7	1.1	32	-0.7	59	0	0	0	21	2	6	3
77	2.5	0.5	2	1.7	0.7	9	0.8	0.1	0.5	59	0.5	0.8	32	-0.4	57	0	1	1	23	4	4	1
78	2.1	0.7	22	2.2	0.7	20	-0.1	0.8	1.1	58	1.4	1.2	32	-0.6	36	5	10	7	12	3	10	7
79	0.0	0.0	0	1.6	0.5	7	-1.6	0.0	0.0	59	0.3	0.7	32	-0.3	59	0	0	0	25	3	4	0
80	0.0	0.0	0	1.9	0.5	10	-1.9	0.0	0.0	58	0.6	0.9	32	-0.6	58	0	0	0	22	2	7	1
81	0.0	0.0	0	1.9	0.3	7	-1.9	0.0	0.0	59	0.4	0.8	32	-0.4	59	0	0	0	25	1	6	0
82	0.0	0.0	0	2.0	0.8	6	-2.0	0.0	0.0	59	0.4	0.9	32	-0.4	59	0	0	0	26	2	2	2
83	0.0	0.0	0	2.1	1.0	7	-2.1	0.0	0.0	59	0.5	1.0	33	-0.5	59	0	0	0	26	3	0	4
84	2.0	0.0	3	2.6	0.5	12	-0.6	0.1	0.5	58	1.0	1.3	32	-0.9	55	1	1	1	20	0	5	7
85	0.0	0.0	0	2.0	0.8	3	-2.0	0.0	0.0	59	0.2	0.6	33	-0.2	59	0	0	0	30	1	1	1
86	0.0	0.0	0	1.8	0.9	10	-1.8	0.0	0.0	59	0.6	1.0	32	-0.6	59	0	0	0	22	5	2	3
87	0.0	0.0	0	2.6	0.5	5	-2.6	0.0	0.0	59	0.4	1.0	32	-0.4	59	0	0	0	27	0	2	3
88	0.0	0.0	0	2.1	0.8	7	-2.1	0.0	0.0	59	0.5	1.0	32	-0.5	59	0	0	0	25	2	2	3
89	2.1	0.7	17	2.4	0.8	19	-0.3	0.6	1.0	57	1.4	1.3	32	-0.8	40	4	8	5	13	4	4	11
90	2.8	0.4	9	2.3	0.9	11	0.5	0.4	1.0	58	0.8	1.2	30	-0.4	49	0	2	7	17	3	2	6
91	2.5	0.8	29	2.6	0.7	23	-0.1	1.2	1.4	58	1.9	1.3	31	-0.7	29	5	5	19	8	3	4	16
92	2.3	0.7	11	2.1	0.7	11	0.2	0.4	0.9	59	0.7	1.1	31	-0.3	48	2	4	5	20	2	6	3
93	2.3	0.8	12	2.1	0.7	18	0.3	0.5	1.0	55	1.2	1.1	31	-0.7	43	3	2	7	13	4	9	5
94	2.0	1.0	2	2.4	0.7	10	-0.4	0.1	0.4	58	0.8	1.2	32	-0.7	56	1	0	1	22	1	4	5
95	2.0	0.0	1	2.7	0.7	7	-0.7	0.0	0.3	59	0.6	1.2	32	-0.6	58	0	1	0	25	1	0	6
96	2.7	0.6	12	2.8	0.6	13	-0.1	0.6	1.1	58	1.1	1.3	32	-0.6	46	1	2	9	19	1	1	11
97	2.7	0.5	34	2.8	0.6	22	-0.0	1.6	1.4	57	2.0	1.3	31	-0.3	23	1	7	26	9	2	1	19
98	2.0	0.0	1	1.6	0.8	5	0.4	0.0	0.3	59	0.2	0.7	33	-0.2	58	0	1	0	28	3	1	1
99	2.8	0.4	4	2.3	0.6	12	0.5	0.2	0.7	59	0.9	1.2	31	-0.7	55	0	1	3	19	1	7	4
100	2.8	0.4	18	2.6	0.7	16	0.2	0.9	1.3	57	1.4	1.4	31	-0.5	39	0	4	14	15	2	2	12

TASK	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK							ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS							DISTRIBUTION OF WORKER RESPONSES				DISTRIBUTION OF SUPERVISOR RESPONSES			
	WORKERS			SUPERVISORS			D:W-S	WORKERS			SUPERVISORS			D:W-S								
	MEAN	SD	N	MEAN	SD	N	MEAN	MEAN	SD	N	MEAN	SD	N	MEAN	NONE	LOW	MED	HIGH	NONE	LOW	MED	HIGH
101	2.4	0.7	30	2.3	0.7	25	0.0	1.3	1.3	55	1.8	1.1	32	-0.5	25	4	11	15	7	3	11	11
102	2.2	0.7	16	2.5	0.6	19	-0.3	0.6	1.0	58	1.5	1.3	32	-0.9	42	3	7	6	13	1	7	11
103	2.5	0.5	2	2.8	0.4	4	-0.3	0.1	0.5	59	0.3	0.9	33	-0.2	57	0	1	1	29	0	1	3
104	2.5	0.5	4	2.0	0.9	5	0.5	0.2	0.6	58	0.3	0.8	33	-0.1	54	0	2	2	28	2	1	2
105	2.5	0.5	2	2.0	0.8	7	0.5	0.1	0.5	59	0.4	0.9	32	-0.4	57	0	1	1	25	2	3	2
106	2.5	0.8	6	2.0	0.7	9	0.5	0.3	0.8	59	0.6	1.0	31	-0.3	53	1	1	4	22	2	5	2
107	2.7	0.5	6	2.3	0.7	8	0.4	0.3	0.8	59	0.6	1.0	31	-0.3	53	0	2	4	23	1	4	3
108	2.9	0.3	7	2.1	0.8	8	0.7	0.3	0.9	59	0.5	1.0	31	-0.2	52	0	1	6	23	2	3	3
109	0.0	0.0	0	1.6	0.8	5	-1.6	0.0	0.0	59	0.2	0.7	33	-0.2	59	0	0	0	28	3	1	1
110	2.9	0.3	10	2.4	0.7	9	0.5	0.5	1.1	59	0.7	1.2	32	-0.2	49	0	1	9	23	1	3	5
111	0.0	0.0	0	2.7	0.5	6	-2.7	0.0	0.0	59	0.5	1.1	32	-0.5	59	0	0	0	26	0	2	4
112	3.0	0.0	1	1.0	0.0	2	2.0	0.1	0.4	59	0.1	0.2	33	-0.0	58	0	0	1	31	2	0	0
113	3.0	0.0	1	0.0	0.0	0	3.0	0.1	0.4	59	0.0	0.0	33	0.1	58	0	0	1	33	0	0	0
114	2.4	0.5	5	2.2	0.7	11	0.2	0.2	0.7	59	0.8	1.1	31	-0.6	54	0	3	2	20	2	5	4
115	2.3	0.5	3	2.2	0.8	9	0.1	0.1	0.5	58	0.6	1.1	32	-0.5	55	0	2	1	23	2	3	4
116	2.2	0.4	5	2.3	0.7	6	-0.1	0.2	0.6	59	0.4	1.0	33	-0.2	54	0	4	1	27	1	2	3
117	2.6	0.7	52	2.8	0.5	33	-0.2	2.4	1.0	57	2.8	0.5	33	-0.4	5	5	12	35	0	1	5	27
118	1.7	0.7	43	2.0	0.9	29	-0.3	1.3	1.0	58	1.7	1.0	33	-0.5	15	20	16	7	4	11	8	10
119	2.5	0.7	49	2.9	0.3	33	-0.4	2.1	1.1	58	2.9	0.3	33	-0.8	9	5	16	28	0	0	4	29
120	2.5	0.6	51	2.9	0.2	32	-0.4	2.2	1.0	58	2.8	0.6	33	-0.6	7	4	16	31	1	0	2	30
121	2.4	0.7	50	2.6	0.6	32	-0.2	2.1	1.0	58	2.5	0.7	33	-0.5	8	5	21	24	1	2	8	22
122	2.6	0.5	34	2.7	0.6	24	-0.0	1.5	1.4	59	1.9	1.3	33	-0.4	25	1	11	22	9	2	4	18
123	2.5	0.7	43	3.0	0.2	29	-0.4	1.9	1.3	58	2.6	1.0	33	-0.7	15	5	10	28	4	0	1	28
124	2.7	0.6	42	2.8	0.5	30	-0.2	1.9	1.3	58	2.6	0.9	33	-0.6	16	2	10	30	3	1	3	26
125	2.3	0.7	51	2.7	0.5	33	-0.3	2.1	1.0	58	2.7	0.5	33	-0.6	7	7	20	24	0	0	11	22
126	2.5	0.7	44	2.9	0.3	30	-0.4	1.9	1.2	58	2.6	0.9	33	-0.7	14	6	11	27	3	0	4	26
127	2.2	0.7	50	2.6	0.5	32	-0.4	1.9	1.0	58	2.5	0.7	33	-0.6	8	10	21	13	1	0	13	19
128	2.5	0.7	42	2.9	0.3	28	-0.3	1.8	1.3	58	2.5	1.1	33	-0.6	16	4	11	27	5	0	3	25
129	2.2	0.8	20	2.6	0.6	17	-0.4	0.7	1.1	59	1.3	1.4	33	-0.6	39	5	6	9	16	1	5	11
130	2.5	0.6	45	2.8	0.6	28	-0.3	2.0	1.2	57	2.3	1.1	33	-0.4	12	3	17	25	5	2	3	23
131	2.5	0.7	45	2.8	0.5	30	-0.3	2.0	1.2	57	2.5	0.9	33	-0.6	12	5	13	27	3	1	4	25
132	2.3	0.7	50	2.7	0.6	33	-0.4	2.1	1.0	56	2.7	0.6	33	-0.6	6	8	19	23	0	3	5	25
133	2.4	0.7	38	2.8	0.5	29	-0.4	1.6	1.3	58	2.5	0.9	32	-0.9	20	5	12	21	3	1	4	24
134	2.3	0.7	11	2.1	1.0	7	0.1	0.4	0.9	59	0.5	1.0	33	-0.0	48	2	4	5	26	3	0	4
135	2.3	0.7	13	2.4	0.8	13	-0.1	0.5	1.0	59	0.9	1.3	33	-0.4	46	2	5	6	20	3	2	8

TASK	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK: WORKERS MEAN	SD	N	SUPERVISORS MEAN	SD	N	D:W-S MEAN	ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS: WORKERS MEAN	SD	N	SUPERVISORS MEAN	SD	N	D:W-S MEAN	DISTRIBUTION OF WORKER RESPONSES: NONE	LOW	MED	HIGH	DISTRIBUTION OF SUPERVISOR RESPONSES: NONE	LOW	MED	HIGH
136	2.1	0.7	48	2.3	0.8	33	-0.2	1.7	1.0	59	2.3	0.8	33	-0.6	11	11	23	14	0	7	9	17
137	2.3	0.8	37	2.3	0.9	23	-0.0	1.4	1.3	59	1.6	1.3	33	0.2	22	8	10	19	10	6	4	13
138	2.7	0.6	44	2.7	0.6	31	-0.0	2.1	1.2	57	2.5	0.9	33	-0.5	13	2	10	32	2	2	5	24
139	2.7	0.6	45	2.8	0.5	31	-0.1	2.1	1.3	59	2.6	0.8	33	-0.6	14	3	8	34	2	2	2	27
140	2.2	0.8	50	2.3	0.7	32	-0.2	1.9	1.0	56	2.3	0.8	33	-0.3	6	11	19	20	1	4	13	15
141	2.3	0.7	47	2.5	0.6	32	-0.2	1.9	1.1	58	2.4	0.7	33	-0.6	11	7	19	21	1	2	12	18
142	2.4	0.7	42	2.6	0.6	28	-0.2	1.7	1.2	58	2.2	1.1	33	-0.5	16	5	17	20	5	1	10	17
143	2.6	0.6	51	2.8	0.4	33	-0.1	2.3	1.0	58	2.8	0.4	33	-0.4	7	2	14	35	0	0	8	25
144	2.6	0.7	49	2.8	0.4	32	-0.2	2.2	1.1	58	2.7	0.6	33	-0.6	9	5	11	33	1	0	6	26
145	2.2	0.8	50	2.5	0.7	33	-0.2	1.9	1.1	58	2.5	0.7	33	-0.5	8	12	15	23	0	3	12	18
146	2.5	0.7	47	2.8	0.5	31	-0.3	2.0	1.2	58	2.6	0.8	33	-0.6	11	5	14	28	2	1	5	25
147	2.2	0.7	49	2.4	0.7	32	-0.3	1.8	1.0	58	2.4	0.8	33	-0.5	9	9	22	18	1	3	12	17
148	2.6	0.6	45	2.8	0.6	31	-0.2	2.0	1.2	59	2.6	0.9	33	-0.6	14	4	10	31	2	2	3	26
149	2.7	0.6	44	2.8	0.5	29	-0.1	2.0	1.3	59	2.5	1.0	33	-0.5	15	3	9	32	4	1	4	24
150	2.1	0.8	50	2.3	0.7	33	-0.2	1.8	1.1	58	2.3	0.7	33	-0.5	8	14	16	20	0	5	13	15
151	2.6	0.6	47	2.8	0.5	32	-0.2	2.1	1.2	58	2.7	0.7	33	-0.6	11	4	12	31	1	2	3	27
152	2.6	0.7	44	2.9	0.3	30	-0.3	2.0	1.2	57	2.6	0.9	33	-0.6	13	4	10	30	3	0	4	26
153	2.4	0.7	32	2.6	0.7	20	-0.2	1.3	1.3	59	1.6	1.4	33	-0.3	27	5	8	19	13	2	3	15
154	2.7	0.6	23	2.5	0.8	14	0.2	1.0	1.4	59	1.1	1.3	33	-0.0	36	2	4	17	19	3	1	10
155	2.3	0.7	52	2.6	0.7	32	-0.2	2.1	1.0	57	2.6	0.7	32	-0.4	5	8	18	26	0	4	6	22
156	2.4	0.7	47	2.8	0.6	32	-0.3	2.0	1.1	57	2.7	0.7	33	-0.7	10	7	14	26	1	2	4	26
157	2.6	0.6	41	2.9	0.3	29	-0.2	1.8	1.3	59	2.5	1.0	33	-0.7	18	3	9	29	4	0	4	25
158	2.6	0.7	43	2.7	0.6	31	-0.1	1.9	1.3	58	2.5	0.9	33	-0.6	15	4	9	30	2	3	3	25
159	2.6	0.7	38	2.7	0.6	26	-0.0	1.7	1.4	59	2.1	1.2	33	-0.4	21	4	6	28	7	2	5	19
160	2.5	0.7	52	2.8	0.4	33	-0.3	2.3	1.0	57	2.8	0.4	33	-0.5	5	7	11	34	0	0	6	27
161	2.1	0.9	11	2.0	0.9	8	0.1	0.4	0.9	59	0.5	1.0	33	-0.1	48	4	2	5	25	3	2	3
162	2.3	0.7	54	2.5	0.6	33	-0.3	2.1	0.9	58	2.5	0.6	33	-0.4	4	7	25	22	0	1	13	19
163	2.4	0.7	54	2.7	0.4	33	-0.4	2.2	0.9	58	2.7	0.4	33	-0.5	4	7	21	26	0	0	9	24
164	2.1	0.6	33	2.2	0.9	21	-0.2	1.2	1.2	59	1.4	1.3	33	-0.3	26	10	11	12	12	6	4	11
165	2.0	0.8	16	2.0	0.9	9	0.0	0.5	1.0	59	0.5	1.0	33	-0.0	43	5	6	5	24	4	1	4
166	2.3	0.7	52	2.4	0.7	31	-0.2	2.0	0.9	58	2.3	0.9	33	-0.2	6	7	24	21	2	3	12	16
167	2.3	0.7	33	2.3	0.8	26	-0.0	1.3	1.3	59	1.8	1.2	33	-0.6	26	5	13	15	7	6	5	15
168	2.4	0.7	53	2.7	0.5	33	-0.3	2.2	0.9	58	2.7	0.5	33	-0.5	5	6	19	28	0	0	10	23
169	2.1	0.7	52	2.2	0.8	33	-0.1	1.9	0.9	57	2.2	0.8	33	-0.3	5	13	23	16	0	8	11	14
170	2.2	0.7	51	2.3	0.8	33	-0.1	1.9	1.0	58	2.3	0.8	33	-0.4	7	10	22	19	0	7	9	17

TASK	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK							ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS							DISTRIBUTION OF WORKER RESPONSES				DISTRIBUTION OF SUPERVISOR RESPONSES			
	WORKERS			SUPERVISORS			D:W-S	WORKERS			SUPERVISORS			D:W-S								
	MEAN	SD	N	MEAN	SD	N	MEAN	MEAN	SD	N	MEAN	SD	N	MEAN	NONE	LOW	MED	HIGH	NONE	LOW	MED	HIGH
171	2.4	0.7	48	2.6	0.5	30	-0.2	2.0	1.1	58	2.4	0.9	33	-0.4	10	5	17	26	3	1	9	20
172	2.2	0.7	32	2.4	0.8	25	-0.1	1.2	1.2	59	1.8	1.2	33	-0.6	27	5	15	12	8	5	6	14
173	2.4	0.7	48	2.7	0.5	31	-0.4	1.9	1.1	58	2.5	0.8	33	-0.6	10	7	17	24	2	1	7	23
174	2.0	0.8	21	2.4	0.9	17	-0.4	0.7	1.1	59	1.2	1.3	33	-0.5	38	8	6	7	16	5	1	11
175	2.5	0.7	43	2.6	0.6	31	-0.1	1.8	1.3	59	2.5	0.9	33	-0.6	16	5	10	28	2	3	5	23
176	2.5	0.8	36	2.7	0.7	26	-0.2	1.5	1.3	59	2.1	1.2	33	-0.6	23	6	7	23	7	3	3	20
177	2.6	0.7	50	2.8	0.4	30	-0.2	2.2	1.1	59	2.5	0.9	33	-0.4	9	5	11	34	3	0	6	24
178	2.5	0.7	47	2.7	0.5	29	-0.2	2.0	1.2	59	2.4	1.0	33	-0.4	12	7	9	31	4	0	9	20
179	2.5	0.7	51	2.5	0.6	33	-0.1	2.2	1.0	58	2.5	0.6	33	-0.4	7	7	14	30	0	2	11	20
180	2.5	0.7	34	2.6	0.7	24	-0.1	1.5	1.4	59	1.9	1.3	33	-0.5	25	5	6	23	9	3	3	18
181	2.4	0.7	50	2.7	0.5	32	-0.2	2.1	1.1	58	2.6	0.7	33	-0.5	8	7	14	29	1	0	11	21
182	2.5	0.6	48	2.6	0.5	32	-0.1	2.1	1.1	58	2.6	0.5	32	-0.6	10	4	16	28	0	1	10	21
183	2.4	0.7	46	2.6	0.7	32	-0.2	2.0	1.2	57	2.5	0.8	33	-0.6	11	6	14	26	1	3	7	22
184	2.4	0.7	47	2.6	0.6	32	-0.2	2.0	1.1	57	2.5	0.7	33	-0.6	10	7	14	26	1	2	8	22
185	2.4	0.7	51	2.7	0.6	26	-0.2	2.1	1.0	58	2.5	0.9	28	-0.3	7	6	18	27	2	2	5	19
186	2.3	0.7	49	2.6	0.6	32	-0.3	2.0	1.1	58	2.5	0.7	33	-0.6	9	8	16	25	1	2	8	22
187	2.5	0.7	51	2.7	0.4	33	-0.2	2.2	1.1	58	2.7	0.4	33	-0.5	7	6	12	33	0	0	9	24
188	2.1	0.7	51	2.2	0.8	33	-0.2	1.8	0.9	57	2.2	0.8	33	-0.4	6	12	24	15	0	7	11	15
189	2.4	0.7	51	2.6	0.6	32	-0.2	2.1	1.0	58	2.5	0.7	33	-0.4	7	7	16	28	1	2	10	20
190	2.1	0.9	51	2.3	0.8	32	-0.2	1.8	1.1	58	2.2	0.8	33	-0.4	7	17	13	21	3	6	11	15
191	2.5	0.7	49	2.7	0.5	30	-0.3	2.1	1.1	57	2.5	0.9	33	-0.4	8	6	14	29	3	1	6	23
192	1.5	0.9	4	2.2	1.0	5	-0.7	0.1	0.4	59	0.3	0.9	33	-0.2	55	3	0	1	28	2	0	3
193	2.2	0.9	6	2.0	0.9	5	0.2	0.2	0.7	59	0.3	0.8	33	-0.1	53	2	1	3	28	2	1	2
194	2.3	0.8	35	2.4	0.7	23	-0.1	1.4	1.3	59	1.7	1.2	32	-0.4	24	8	9	18	9	3	8	12
195	2.3	0.7	45	2.4	0.7	28	-0.1	1.8	1.2	57	2.1	1.1	33	-0.2	12	7	16	22	5	3	10	15
196	2.4	0.7	49	2.6	0.6	30	-0.2	2.0	1.1	58	2.4	0.9	33	-0.4	9	7	17	25	3	2	8	20
197	2.3	0.8	50	2.6	0.6	30	-0.3	2.0	1.1	58	2.4	1.0	33	-0.4	8	10	14	26	3	2	7	21
198	2.2	0.8	45	2.6	0.7	27	-0.3	1.7	1.2	58	2.1	1.2	33	-0.4	13	9	16	20	6	3	5	19
199	2.4	0.7	42	2.8	0.5	30	-0.4	1.7	1.2	59	2.5	0.9	33	-0.8	17	5	15	22	3	1	4	25
200	2.4	0.8	40	2.6	0.6	26	-0.2	1.7	1.3	58	2.1	1.2	33	-0.4	18	7	10	23	7	2	6	18
201	2.6	0.7	27	2.6	0.7	16	-0.1	1.2	1.4	59	1.3	1.4	33	-0.1	32	4	4	19	17	2	2	12
202	2.5	0.8	32	2.8	0.5	25	-0.2	1.4	1.4	59	2.1	1.3	33	-0.7	27	6	3	23	8	1	4	20
203	2.0	0.8	37	2.3	0.8	27	-0.3	1.3	1.2	59	1.8	1.1	33	-0.6	22	13	11	13	6	6	8	13
204	2.4	0.8	42	2.7	0.5	28	-0.3	1.8	1.3	58	2.3	1.1	33	-0.5	16	7	10	25	5	1	7	20
205	2.7	0.5	33	2.9	0.4	25	-0.2	1.5	1.4	58	2.2	1.3	33	-0.6	25	1	8	24	8	2	1	23

TASK	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK: WORKERS MEAN	WORKERS SD	WORKERS N	SUPERVISORS MEAN	SUPERVISORS SD	SUPERVISORS N	D:W-S MEAN	ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS: WORKERS MEAN	WORKERS SD	WORKERS N	SUPERVISORS MEAN	SUPERVISORS SD	SUPERVISORS N	D:W-S MEAN	DISTRIBUTION OF WORKER RESPONSES: NONE	LOW	MED	HIGH	DISTRIBUTION OF SUPERVISOR RESPONSES: NONE	LOW	MED	HIGH
206	2.5	0.7	42	2.8	0.4	26	-0.3	1.8	1.3	58	2.2	1.2	33	-0.4	16	5	10	27	7	0	4	22
207	2.4	0.7	41	2.4	0.7	28	-0.0	1.7	1.2	58	2.0	1.1	33	-0.4	17	6	14	21	5	4	9	15
208	2.4	0.7	42	2.6	0.6	29	-0.2	1.8	1.2	57	2.3	1.0	33	-0.5	15	5	15	22	4	2	8	19
209	2.3	0.6	47	2.7	0.5	32	-0.4	1.9	1.0	56	2.6	0.7	33	-0.6	9	5	23	19	1	1	9	22
210	2.4	0.7	45	2.7	0.5	30	-0.2	1.9	1.2	58	2.4	0.9	33	-0.5	13	5	15	25	3	1	8	21
211	2.3	0.7	44	2.6	0.5	28	-0.3	1.7	1.2	58	2.2	1.0	33	-0.5	14	7	17	20	5	0	10	18
212	2.2	0.7	53	2.7	0.6	33	-0.4	2.1	0.9	56	2.7	0.6	33	-0.6	3	9	23	21	0	2	7	24
213	2.2	0.7	52	2.4	0.7	33	-0.3	2.0	0.9	56	2.4	0.7	33	-0.4	4	11	22	19	0	5	9	19
214	2.4	0.7	47	2.6	0.7	32	-0.2	2.0	1.1	57	2.5	0.8	33	-0.5	10	6	16	25	1	4	6	22
215	2.7	0.5	50	3.0	0.2	33	-0.3	2.4	1.0	56	3.0	0.2	33	-0.6	6	2	12	36	0	0	1	32
216	2.6	0.5	52	2.9	0.2	33	-0.3	2.4	0.8	56	2.9	0.2	33	-0.5	4	1	19	32	0	0	2	31
217	2.3	0.7	53	2.6	0.7	32	-0.3	2.2	0.9	56	2.5	0.8	33	-0.3	3	8	21	24	1	4	5	23
218	2.7	0.5	52	3.0	0.0	33	-0.3	2.4	0.9	57	3.0	0.0	33	-0.6	5	1	16	35	0	0	0	33
219	2.6	0.6	52	2.9	0.3	32	-0.3	2.4	0.9	56	2.8	0.6	33	-0.4	4	4	12	36	1	0	4	28
220	2.7	0.5	52	3.0	0.0	32	-0.3	2.5	0.8	56	2.9	0.5	33	-0.4	4	1	16	35	1	0	0	32
221	2.8	0.5	53	3.0	0.2	32	-0.2	2.6	0.8	56	2.9	0.5	33	-0.3	3	1	11	41	1	0	1	31
222	2.3	0.7	46	2.8	0.5	31	-0.5	1.9	1.1	57	2.6	0.8	33	-0.7	11	6	20	20	2	1	5	25
223	2.8	0.6	52	2.9	0.3	33	-0.3	2.4	0.9	57	2.9	0.3	33	-0.5	5	3	14	35	0	0	3	30
224	2.6	0.6	52	2.8	0.4	33	-0.2	2.4	0.9	56	2.8	0.4	33	-0.4	4	2	17	31	0	0	8	25
225	2.6	0.5	53	2.8	0.4	33	-0.2	2.5	0.8	56	2.8	0.4	33	-0.4	3	1	18	34	0	0	5	28
226	2.5	0.6	50	2.8	0.5	33	-0.3	2.2	1.0	56	2.8	0.5	33	-0.6	6	4	18	28	0	2	3	28
227	2.6	0.5	45	2.8	0.6	29	-0.1	2.1	1.2	57	2.4	1.0	33	-0.3	12	1	14	30	4	2	3	24
228	2.3	0.7	50	2.3	0.8	31	-0.1	2.0	1.0	57	2.2	0.9	33	-0.2	6	8	21	21	2	6	9	16
229	2.4	0.7	54	2.6	0.5	32	-0.2	2.3	0.8	56	2.5	0.7	33	-0.2	2	7	21	26	1	0	14	18
230	2.4	0.6	54	2.6	0.5	33	-0.2	2.3	0.8	56	2.8	0.5	33	-0.3	2	4	23	27	0	0	13	20
231	2.2	0.7	42	2.5	0.7	28	-0.3	1.7	1.1	56	2.1	1.1	33	-0.4	14	6	21	15	5	4	7	17
232	2.4	0.7	48	2.5	0.7	32	-0.1	2.1	1.1	56	2.4	0.8	33	-0.3	8	5	17	26	1	4	8	20
233	2.4	0.7	52	2.6	0.6	32	-0.3	2.2	0.9	56	2.5	0.7	33	-0.3	4	7	19	26	1	2	8	22
234	2.5	0.6	54	2.8	0.4	33	-0.3	2.4	0.8	57	2.8	0.4	33	-0.5	3	3	22	29	0	0	6	27
235	2.3	0.7	53	2.8	0.7	32	-0.1	2.2	0.9	57	2.4	0.8	33	-0.2	4	6	23	24	1	4	10	18
236	2.1	0.8	54	2.3	0.8	33	-0.2	2.0	0.9	56	2.3	0.8	33	-0.3	2	14	21	19	0	9	8	17
237	2.3	0.7	54	2.6	0.5	32	-0.3	2.2	0.8	57	2.6	0.5	33	-0.4	3	6	24	22	0	0	14	19
238	2.1	0.8	55	2.3	0.8	33	-0.2	2.0	0.9	57	2.3	0.8	33	-0.3	2	14	21	20	0	7	9	17
239	2.3	0.7	54	2.6	0.6	33	-0.3	2.2	0.8	57	2.6	0.6	33	-0.4	3	6	25	23	0	1	12	20
240	2.2	0.7	54	2.5	0.6	33	-0.3	2.1	0.9	57	2.5	0.6	33	-0.4	3	9	23	22	0	2	11	20

TASK	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK							ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS							DISTRIBUTION OF WORKER RESPONSES				DISTRIBUTION OF SUPERVISOR RESPONSES			
	WORKERS			SUPERVISORS			D:W-S	WORKERS			SUPERVISORS			D:W-S								
	MEAN	SD	N	MEAN	SD	N	MEAN	MEAN	SD	N	MEAN	SD	N	MEAN	NONE	LOW	MED	HIGH	NONE	LOW	MED	HIGH
241	2.5	0.6	53	2.8	0.4	33	-0.3	2.3	0.9	57	2.8	0.4	33	-0.5	4	4	21	28	0	0	8	25
242	2.3	0.6	54	2.5	0.7	33	-0.1	2.2	0.8	57	2.5	0.7	33	-0.2	3	5	26	23	0	4	10	19
243	2.4	0.7	50	2.7	0.5	30	-0.3	2.1	1.0	57	2.5	0.9	33	-0.4	7	5	22	23	3	1	7	22
244	2.6	0.6	54	2.8	0.4	33	-0.2	2.4	0.8	57	2.8	0.4	33	-0.4	3	3	18	33	0	0	7	26
245	2.1	0.8	40	2.3	0.8	23	-0.3	1.5	1.1	56	1.6	1.3	33	-0.2	16	11	15	14	10	5	5	13
246	2.3	0.7	34	2.5	0.8	23	-0.3	1.4	1.2	57	1.8	1.3	33	-0.4	23	6	13	15	10	4	3	16
247	2.4	0.7	53	2.6	0.5	33	-0.2	2.3	0.8	56	2.6	0.5	33	-0.4	3	5	21	27	0	1	10	22
248	2.3	0.7	49	2.4	0.7	29	-0.1	2.1	1.0	56	2.2	1.0	33	-0.1	7	8	16	25	4	4	8	17
249	2.7	0.5	54	2.8	0.4	33	-0.1	2.5	0.8	57	2.8	0.4	33	-0.2	3	1	15	38	0	0	7	26
250	2.3	0.7	23	2.5	0.8	21	-0.2	0.9	1.2	59	1.6	1.4	33	-0.7	36	3	9	11	12	4	2	15
251	2.4	0.8	47	2.5	0.7	30	-0.1	1.9	1.1	57	2.2	1.0	33	-0.3	10	8	14	25	3	3	10	17
252	2.6	0.6	14	3.0	0.0	9	-0.4	0.6	1.2	59	0.8	1.3	32	-0.2	45	1	3	10	23	0	0	9
253	2.5	0.7	52	2.8	0.4	32	-0.3	2.3	1.0	57	2.8	0.6	33	-0.4	5	5	14	33	1	0	5	27
254	2.3	0.7	53	2.4	0.7	33	-0.1	2.1	0.9	57	2.4	0.7	33	-0.3	4	8	21	24	0	3	13	17
255	2.6	0.7	54	2.9	0.3	33	-0.3	2.4	0.9	57	2.9	0.3	33	-0.5	3	5	13	36	0	0	3	30
256	2.2	0.7	54	2.4	0.8	33	-0.3	2.1	0.9	57	2.4	0.8	33	-0.4	3	11	23	20	0	7	5	21
257	2.1	0.8	53	2.3	0.8	33	-0.2	2.0	0.9	57	2.3	0.8	33	-0.3	4	12	22	19	0	6	11	16
258	2.3	0.8	52	2.7	0.5	33	-0.3	2.2	0.9	56	2.7	0.5	33	-0.5	4	9	17	26	0	1	9	23
259	2.3	0.7	47	2.5	0.6	30	-0.3	1.9	1.0	56	2.3	0.9	33	-0.4	9	6	23	18	3	2	10	18
260	2.3	0.7	23	2.3	0.9	22	-0.0	0.9	1.2	59	1.5	1.3	33	-0.6	36	4	9	10	11	7	2	13
261	2.4	0.7	47	2.8	0.4	31	-0.4	2.0	1.1	57	2.6	0.8	33	-0.6	10	6	16	25	2	0	7	24
262	2.4	0.7	51	2.7	0.4	32	-0.4	2.1	1.0	57	2.6	0.6	33	-0.5	6	8	17	26	1	0	9	23
263	2.3	0.6	53	2.5	0.7	33	-0.1	2.2	0.8	57	2.5	0.7	33	-0.3	4	4	27	22	0	3	12	18
264	2.3	0.7	14	2.3	0.9	15	-0.0	0.5	1.0	59	1.1	1.3	33	-0.5	45	2	6	6	18	4	2	9
265	2.9	0.3	8	2.6	0.8	9	0.3	0.4	1.0	59	0.7	1.2	33	-0.3	51	0	1	7	24	2	0	7
266	2.7	0.6	15	2.3	0.9	13	0.4	0.7	1.2	59	0.9	1.3	33	-0.2	44	1	2	12	20	4	1	8
267	2.8	0.4	13	2.2	0.9	13	0.5	0.6	1.2	59	0.9	1.2	33	-0.3	46	0	3	10	20	4	2	7
268	2.3	0.7	53	2.3	0.8	31	-0.0	2.1	0.9	58	2.3	0.9	32	-0.1	5	6	24	23	1	6	9	16
269	2.9	0.3	7	2.3	0.9	7	0.6	0.3	0.9	59	0.5	1.0	33	-0.1	52	0	1	6	26	2	1	4
270	2.7	0.6	52	2.8	0.5	33	-0.2	2.4	0.9	57	2.8	0.5	33	-0.4	5	3	12	37	0	1	4	28
271	2.4	0.6	48	2.8	0.4	33	-0.4	2.1	1.0	56	2.8	0.4	33	-0.8	8	4	19	25	0	0	5	28
272	2.6	0.7	7	2.1	1.0	9	0.5	0.3	0.9	59	0.6	1.1	33	-0.3	52	1	1	5	24	4	0	5
273	2.1	0.7	37	2.5	0.7	31	-0.4	1.3	1.2	58	2.4	0.9	33	-1.0	21	8	17	12	2	4	6	21
274	2.3	0.7	47	2.6	0.6	29	-0.3	1.9	1.1	57	2.3	1.0	33	-0.4	10	6	21	20	4	2	7	20
275	2.4	0.7	54	2.5	0.7	33	-0.2	2.2	0.8	57	2.5	0.7	33	-0.3	3	6	23	25	0	3	10	20

TASK	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK							ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS							DISTRIBUTION OF WORKER RESPONSES				DISTRIBUTION OF SUPERVISOR RESPONSES			
	WORKERS			SUPERVISORS			D:W-S	WORKERS			SUPERVISORS			D:W-S								
	MEAN	SD	N	MEAN	SD	N	MEAN	MEAN	SD	N	MEAN	SD	N	MEAN	NONE	LOW	MED	HIGH	NONE	LOW	MED	HIGH
276	2.2	0.7	49	2.3	0.7	32	-0.1	1.9	1.0	58	2.3	0.8	33	-0.4	9	7	24	18	1	5	11	16
277	2.2	0.7	53	2.3	0.7	32	-0.1	2.0	0.9	57	2.2	0.8	33	-0.2	4	9	26	18	1	5	13	14
278	2.1	0.7	43	2.4	0.6	30	-0.3	1.6	1.1	59	2.2	0.9	33	-0.6	16	7	23	13	3	2	14	14
279	2.2	0.6	50	2.5	0.7	32	-0.2	1.9	1.0	58	2.4	0.8	33	-0.5	8	6	26	18	1	4	9	19
280	2.5	0.6	23	2.5	0.8	16	-0.0	1.0	1.3	58	1.2	1.4	33	-0.2	35	1	10	12	17	3	2	11
281	2.3	0.6	54	2.5	0.6	33	-0.2	2.2	0.8	57	2.5	0.6	33	-0.4	3	5	27	22	0	2	11	20
282	2.1	0.7	53	2.5	0.6	33	-0.3	2.0	0.8	57	2.5	0.6	33	-0.5	4	9	28	16	0	2	14	17
283	2.3	0.8	49	2.4	0.7	31	-0.1	1.9	1.1	58	2.2	0.9	33	-0.3	9	11	14	24	2	5	10	16
284	2.3	0.7	53	2.5	0.6	33	-0.2	2.1	0.9	57	2.5	0.6	33	-0.4	4	9	21	23	0	2	13	18
285	2.3	0.7	54	2.6	0.6	33	-0.3	2.2	0.9	57	2.6	0.6	33	-0.4	3	7	22	25	0	2	9	22
286	2.2	0.7	50	2.4	0.7	31	-0.2	1.9	1.0	57	2.3	0.9	33	-0.3	7	8	24	18	2	4	10	17
287	2.4	0.7	53	2.7	0.5	32	-0.3	2.2	0.9	57	2.7	0.5	32	-0.4	4	6	21	26	0	1	9	22
288	2.2	0.8	42	2.1	0.8	26	0.1	1.6	1.2	57	1.7	1.1	33	-0.1	15	9	17	16	7	7	9	10
289	2.1	0.7	53	2.3	0.9	33	-0.1	2.0	0.9	57	2.3	0.9	33	-0.3	4	11	24	18	0	9	6	18
290	2.3	0.6	54	2.5	0.7	33	-0.2	2.2	0.8	57	2.5	0.7	33	-0.3	3	4	29	21	0	3	10	20
291	2.4	0.7	46	2.6	0.7	30	-0.2	1.9	1.2	58	2.4	0.9	32	-0.5	12	6	15	25	2	4	5	21
292	2.4	0.7	39	2.5	0.8	30	-0.2	1.6	1.3	59	2.3	1.0	33	-0.7	20	6	13	20	3	5	4	21
293	2.6	0.6	49	2.8	0.5	33	-0.2	2.2	1.1	58	2.8	0.5	33	-0.6	9	2	17	30	0	1	5	27
294	2.0	0.7	42	2.2	0.8	30	-0.2	1.4	1.1	59	2.0	1.0	33	-0.6	17	12	19	11	3	8	8	14
295	2.0	0.7	45	2.2	0.9	31	-0.2	1.5	1.1	59	2.1	1.0	33	-0.5	14	12	21	12	2	9	7	15
296	2.4	0.7	31	2.4	0.8	28	-0.0	1.3	1.3	58	2.1	1.1	33	-0.8	27	4	11	16	5	5	6	17
297	2.6	0.6	45	2.6	0.6	33	-0.1	2.0	1.2	58	2.6	0.6	33	-0.6	13	4	11	30	0	3	6	24
298	2.5	0.7	42	2.6	0.6	32	-0.1	1.8	1.2	58	2.5	0.8	33	-0.8	16	4	14	24	1	3	6	23
299	2.5	0.7	42	2.5	0.7	33	-0.0	1.8	1.2	58	2.5	0.7	33	-0.7	16	4	14	24	0	3	10	20
300	2.2	0.7	30	2.3	0.9	22	-0.1	1.1	1.2	59	1.5	1.3	33	-0.4	29	6	12	12	11	6	3	13
301	2.3	0.7	50	2.7	0.5	33	-0.5	2.0	1.0	56	2.7	0.5	33	-0.7	6	9	19	22	0	1	7	25
302	2.4	0.8	36	2.6	0.6	29	-0.2	1.5	1.3	58	2.3	1.0	33	-0.8	22	6	10	20	4	2	7	20
303	2.4	0.7	35	2.6	0.6	30	-0.2	1.5	1.3	56	2.4	0.9	33	-0.9	21	5	11	19	3	2	8	20
304	2.0	0.7	23	2.3	0.8	24	-0.4	0.8	1.0	59	1.7	1.3	33	-0.9	36	6	12	5	9	6	4	14
305	2.5	0.7	53	2.7	0.5	33	-0.2	2.4	0.9	56	2.7	0.5	33	-0.3	3	6	15	32	0	0	10	23
306	2.3	0.7	52	2.5	0.7	33	-0.2	2.1	0.9	56	2.5	0.7	33	-0.4	4	7	24	21	0	3	10	20
307	2.3	0.7	39	2.4	0.7	31	-0.1	1.6	1.2	58	2.2	0.9	33	-0.7	19	6	15	18	2	5	9	17
308	2.5	0.7	51	2.8	0.4	33	-0.3	2.3	1.0	57	2.8	0.4	33	-0.5	6	6	11	34	0	0	6	27
309	2.2	0.8	49	2.4	0.7	33	-0.2	1.9	1.0	56	2.4	0.7	33	-0.5	7	10	19	20	0	5	10	18
310	2.7	0.6	14	2.5	0.9	11	0.3	0.7	1.2	58	0.8	1.3	33	-0.2	44	1	2	11	22	3	0	8

TASK	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK							ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS							DISTRIBUTION OF WORKER RESPONSES				DISTRIBUTION OF SUPERVISOR RESPONSES			
	WORKERS			SUPERVISORS			D:W-S	WORKERS			SUPERVISORS			D:W-S								
	MEAN	SD	N	MEAN	SD	N	MEAN	MEAN	SD	N	MEAN	SD	N	MEAN	NONE	LOW	MED	HIGH	NONE	LOW	MED	HIGH
311	2.6	0.6	49	2.9	0.3	33	-0.3	2.2	1.1	57	2.9	0.3	33	-0.7	8	4	11	34	0	0	3	30
312	2.7	0.6	36	2.7	0.5	27	-0.0	1.7	1.4	58	2.2	1.2	33	-0.6	22	2	7	27	6	1	5	21
313	2.7	0.6	40	2.7	0.6	28	-0.0	1.8	1.3	58	2.3	1.1	33	-0.4	18	2	9	29	5	2	5	21
314	2.4	0.8	19	2.5	0.8	14	-0.1	0.8	1.2	58	1.1	1.3	33	-0.3	39	4	3	12	19	3	1	10
315	2.4	0.7	49	2.7	0.6	33	-0.3	2.1	1.1	57	2.7	0.6	33	-0.6	8	7	14	28	0	2	5	26
316	2.5	0.7	52	2.8	0.5	33	-0.3	2.3	1.0	57	2.8	0.5	33	-0.5	5	6	14	32	0	1	4	28
317	2.0	0.8	27	2.3	0.9	20	-0.3	0.9	1.1	57	1.4	1.3	33	-0.4	30	10	8	9	13	6	3	11
318	2.3	0.8	32	2.5	0.8	21	-0.2	1.3	1.3	57	1.6	1.3	33	-0.3	25	6	10	16	12	4	3	14
319	2.4	0.9	16	2.3	0.8	13	0.1	0.7	1.2	58	0.9	1.2	33	-0.2	42	4	1	11	20	3	3	7
320	2.6	0.7	47	2.9	0.3	31	-0.3	2.2	1.2	57	2.8	0.6	32	-0.6	10	5	8	34	1	0	4	27
321	2.7	0.7	50	2.8	0.4	33	-0.2	2.3	1.1	57	2.8	0.4	33	-0.5	7	5	7	38	0	0	5	28
322	2.5	0.7	43	2.8	0.6	33	-0.2	1.9	1.2	57	2.8	0.6	33	-0.9	14	5	11	27	0	2	4	27
323	2.5	0.7	38	2.5	0.8	31	-0.0	1.7	1.3	57	2.4	1.0	33	-0.7	19	4	11	23	2	6	3	22
324	2.5	0.7	48	2.7	0.5	33	-0.2	2.1	1.1	57	2.7	0.5	33	-0.6	9	6	12	30	0	1	7	25
325	2.6	0.7	41	2.7	0.6	31	-0.1	1.9	1.3	57	2.5	0.9	33	-0.7	16	4	7	30	2	2	5	24
326	2.6	0.7	50	2.8	0.4	33	-0.2	2.2	1.0	57	2.8	0.4	33	-0.5	7	5	12	33	0	0	7	26
327	2.5	0.7	49	2.7	0.5	33	-0.2	2.1	1.1	57	2.7	0.5	33	-0.6	8	6	14	29	0	1	8	24
328	2.5	0.7	51	2.8	0.5	33	-0.2	2.2	1.0	57	2.8	0.5	33	-0.5	6	5	15	31	0	1	6	26
329	2.3	0.7	48	2.4	0.8	33	-0.1	1.9	1.0	56	2.4	0.8	33	-0.5	8	8	20	20	0	6	8	19
330	2.1	0.8	30	2.3	0.9	27	-0.2	1.1	1.2	58	1.9	1.2	33	-0.8	28	8	10	12	6	7	5	15
331	2.4	0.8	35	2.5	0.6	28	-0.2	1.5	1.3	57	2.2	1.1	33	-0.7	22	6	10	19	5	2	9	17
332	2.4	0.7	50	2.7	0.6	32	-0.3	2.1	1.0	56	2.6	0.7	33	-0.5	6	7	17	26	1	2	6	24
333	2.4	0.7	41	2.6	0.6	28	-0.2	1.8	1.2	57	2.2	1.1	33	-0.5	16	4	15	22	5	2	6	20
334	2.7	0.5	31	3.0	0.2	25	-0.3	1.5	1.4	57	2.3	1.2	32	-0.9	26	1	8	22	7	0	1	24
335	2.3	0.7	19	2.4	0.7	13	-0.1	0.8	1.1	57	0.9	1.3	33	-0.2	38	3	8	8	20	2	4	7
336	2.1	0.7	19	2.5	0.7	19	-0.4	0.7	1.1	58	1.5	1.4	33	-0.8	39	4	9	6	14	2	5	12
337	2.4	0.7	51	2.8	0.5	32	-0.4	2.2	1.0	56	2.7	0.7	33	-0.5	5	8	14	29	1	1	5	26
338	2.6	0.6	41	2.8	0.5	29	-0.2	1.9	1.3	57	2.5	1.0	33	-0.6	16	3	11	27	4	1	4	24
339	2.1	0.8	47	2.3	0.9	32	-0.1	1.8	1.1	56	2.2	1.0	33	-0.4	9	12	16	19	1	10	3	19
340	2.0	0.8	46	2.3	0.9	31	-0.3	1.6	1.1	58	2.2	1.0	33	-0.5	12	14	17	15	2	9	4	18
341	2.5	0.7	46	2.7	0.6	32	-0.2	2.0	1.2	58	2.6	0.7	33	-0.6	12	5	14	27	1	2	6	24
342	2.4	0.8	35	2.4	0.8	27	-0.0	1.4	1.3	59	2.0	1.2	33	-0.6	24	6	9	20	6	5	5	17
343	2.4	0.6	40	2.4	0.7	28	0.1	1.7	1.2	59	2.0	1.1	33	-0.3	19	2	18	20	5	4	10	14
344	2.5	0.7	42	2.9	0.3	29	-0.3	1.8	1.3	58	2.5	1.0	33	-0.7	16	4	11	27	4	0	4	25
345	2.2	0.8	51	2.5	0.7	32	-0.3	2.0	1.0	57	2.5	0.8	33	-0.5	6	11	19	21	1	3	9	20

	RESPONDENTS CITING WORKER PERFORMANCE OF A TASK							ALL RESPONDENTS, INCLUDING NON-PERFORMANCE CITATIONS							DISTRIBUTION OF WORKER RESPONSES				DISTRIBUTION OF SUPERVISOR RESPONSES			
	WORKERS			SUPERVISORS			D:W-S	WORKERS			SUPERVISORS			D:W-S								
TASK	MEAN	SD	N	MEAN	SD	N	MEAN	MEAN	SD	N	MEAN	SD	N	MEAN	NONE	LOW	MED	HIGH	NONE	LOW	MED	HIGH
346	2.4	0.8	39	2.7	0.5	29	-0.3	1.6	1.3	59	2.4	1.0	33	-0.8	20	7	9	23	4	1	6	22
347	2.1	0.8	48	2.4	0.7	32	-0.3	1.8	1.0	57	2.4	0.8	33	-0.6	9	11	20	17	1	3	12	17
348	2.5	0.7	30	2.6	0.6	24	-0.2	1.3	1.3	59	1.9	1.3	33	-0.7	29	3	10	17	9	2	5	17
349	2.5	0.7	30	2.8	0.6	24	-0.3	1.3	1.3	58	2.0	1.3	33	-0.7	28	4	8	18	9	2	2	20
350	2.1	0.9	22	2.5	0.6	21	-0.3	0.8	1.2	59	1.6	1.3	33	-0.8	37	7	5	10	12	1	9	11
351	2.5	0.6	29	2.8	0.6	24	-0.2	1.2	1.3	59	2.0	1.3	33	-0.8	30	2	10	17	9	2	2	20
352	2.3	0.8	31	2.6	0.6	24	-0.3	1.3	1.3	57	1.9	1.3	33	-0.6	26	6	9	16	9	2	6	16
353	2.5	0.7	30	2.8	0.5	20	-0.3	1.3	1.3	58	1.7	1.4	33	-0.4	28	3	10	17	13	1	3	16
354	2.5	0.7	24	2.7	0.6	18	-0.2	1.0	1.3	58	1.5	1.4	33	-0.4	34	3	6	15	15	1	4	13
355	2.5	0.8	24	2.6	0.6	23	-0.2	1.0	1.3	58	1.8	1.3	33	-0.8	34	4	5	15	10	2	5	16
356	2.3	0.9	26	2.6	0.6	24	-0.3	1.0	1.3	59	1.9	1.3	33	-0.9	33	7	5	14	9	2	6	16
357	2.2	0.8	33	2.5	0.7	26	-0.2	1.3	1.3	59	1.9	1.2	33	-0.7	26	8	9	16	7	3	8	15
358	2.3	0.8	24	2.6	0.6	24	-0.3	0.9	1.2	58	1.9	1.3	33	-0.9	34	5	7	12	9	2	6	16
359	2.4	0.8	28	2.6	0.6	23	-0.2	1.1	1.3	59	1.8	1.3	33	-0.7	31	6	5	17	10	2	6	15
360	2.4	0.8	28	2.6	0.6	23	-0.2	1.1	1.3	59	1.8	1.3	33	-0.7	31	6	5	17	10	2	5	16
361	2.5	0.8	22	2.6	0.6	23	-0.1	0.9	1.3	59	1.8	1.3	33	-0.9	37	4	4	14	10	2	6	15
362	2.3	0.8	31	2.5	0.6	26	-0.3	1.2	1.3	57	2.1	1.1	32	-0.8	26	7	9	15	6	2	8	16
363	2.5	0.7	52	2.7	0.5	32	-0.3	2.2	1.0	57	2.6	0.7	33	-0.4	5	6	16	30	1	1	7	24
364	2.3	0.7	51	2.6	0.6	32	-0.2	2.1	1.0	57	2.5	0.7	33	-0.4	6	6	22	23	1	2	10	20
365	2.0	0.7	49	2.3	0.8	32	-0.3	1.7	1.0	57	2.2	0.9	33	-0.5	8	13	22	14	1	8	6	18
366	2.2	0.7	50	2.5	0.7	31	-0.3	1.9	1.0	57	2.4	0.8	32	-0.5	7	10	20	20	1	3	9	19
367	2.3	0.7	50	2.5	0.7	31	-0.1	2.0	1.0	58	2.3	0.9	33	-0.3	8	7	19	24	2	3	10	18
368	2.3	0.7	50	2.5	0.7	31	-0.3	2.0	1.0	57	2.4	0.9	33	-0.4	7	9	19	22	2	4	7	20
369	2.2	0.8	37	2.5	0.8	22	-0.3	1.4	1.2	58	1.7	1.3	32	-0.3	21	8	14	15	10	4	4	14
370	2.2	0.8	14	1.9	1.0	9	0.3	0.5	1.0	59	0.5	1.0	33	0.0	45	3	5	6	24	5	0	4
371	2.1	0.9	45	2.3	0.9	31	-0.2	1.7	1.2	56	2.2	1.0	33	-0.5	11	16	8	21	2	10	2	19
372	1.8	0.8	16	2.0	0.9	18	-0.3	0.5	0.9	59	1.1	1.2	33	-0.6	43	8	4	4	15	8	2	8
373	2.0	0.9	42	2.2	0.9	29	-0.2	1.5	1.2	58	2.0	1.1	32	-0.6	16	17	7	18	3	10	2	17
374	2.1	0.8	35	2.2	0.9	24	-0.1	1.2	1.2	58	1.6	1.2	33	-0.3	23	11	11	13	9	8	4	12
375	2.3	0.8	36	2.4	0.9	27	-0.1	1.5	1.3	57	1.9	1.2	33	-0.5	21	8	9	19	6	8	1	18
376	2.1	0.8	35	2.2	0.9	23	-0.0	1.3	1.2	58	1.6	1.2	31	-0.3	23	10	10	15	8	7	5	11
377	1.9	0.9	29	2.0	1.0	23	-0.1	1.0	1.2	57	1.4	1.2	33	-0.4	28	13	5	11	10	10	2	11
378	2.1	0.9	17	2.0	0.9	19	0.1	0.6	1.0	59	1.2	1.2	33	-0.6	42	6	4	7	14	8	3	8
379	2.2	0.8	9	2.0	0.9	13	0.2	0.3	0.9	59	0.8	1.1	33	-0.4	50	2	3	4	20	5	3	5
380	2.3	0.8	43	2.5	0.7	30	-0.2	1.8	1.2	57	2.4	0.9	32	-0.6	14	8	12	23	2	3	8	19

TOTALS: 9965 3551

1725 985

4030 2066

6284 5745

120

Table C-3

Extent Task Is Part of the Job (Q6)[a]

Question 6: Extent Task Is Part of the Position (Workers)

Answer this question so as to give the best description you can of what you do in your present job as an Automotive Mechanic. For each task statement, rate how significant a part of your job it is. Consider and weigh its importance, frequency of occurrence, relevance, and any other factor which you think determines to what extent the task is part of your position. In your own mind, combine these factors into a single rating of how significant a part of your job it represents.

Categories and Values of the Response Scale:

0 = Definitely not a part of my job
1 = Under unusual circumstances may be a minor part of my job
2 = (not defined)
3 = (not defined)
4 = A substantial part of my job
5 = (not defined)
6 = (not defined)
7 = A most significant part of my job

Each of the 13 columns of Table C-3 is identified below.

Column 33:	Average (mean) of worker ratings.
Column 34:	Standard deviation showing degree of response variability.
Column 35:	Number of workers who rated the task 0-7.
Column 36 through 43:	Number of surveyed workers using each level of the scale.
Column 44:	Percent of surveyed workers who rated the task as part of their job. That is, they used a rating level other than "0".

[a]Question 6 was answered by workers in Group 2 for all tasks in the inventory.

Table C-3-continued

Column 45: Percent of surveyed workers who rated the task as at least a "substantial part" of their job. That is, they used a rating level of "4" or higher, indicating it was a reasonably significant part of the job. (This would seem to be a useful indicator of a task's actual relevance to an occupation, serving to differentiate between two occupations where workers in both may at times perform the same task.)

~~4050~~
~~6284~~

TASK INVENTORY DATA SUMMARY
AUTO MECHANICS -- COMPOSITE

TABLE 3: EXTENT TASK IS PART OF THE JOB (Q6)

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
1	0.19	0.57	59	52	4	2	1	0	0	0	0	11.9	0.0
2	0.08	0.33	59	55	3	1	0	0	0	0	0	6.8	0.0
3	1.78	2.09	59	26	9	4	4	11	1	1	3	55.9	27.1
4	1.10	1.87	59	39	6	1	2	8	1	0	2	33.9	18.6
5	0.12	0.90	59	58	0	0	0	0	0	0	1	1.7	1.7
6	1.20	2.06	59	39	4	5	0	5	2	1	3	33.9	18.6
7	0.58	1.60	59	47	6	2	1	0	0	0	3	20.3	5.1
8	0.22	0.76	59	52	5	0	0	2	0	0	0	11.9	3.4
9	0.42	1.11	59	49	4	1	2	2	1	0	0	16.9	5.1
10	1.24	1.95	59	34	9	5	1	5	2	0	3	42.4	16.9
11	0.88	1.72	59	42	5	2	4	3	1	0	2	28.8	10.2
12	0.41	1.41	58	51	3	0	1	1	0	0	2	12.1	5.2
13	0.51	1.31	59	48	3	3	3	0	1	0	1	*18.6	3.4
14	3.54	2.42	59	12	2	6	5	16	4	2	12	79.7	57.6
15	2.17	2.29	59	22	8	6	4	11	2	0	6	62.7	32.2
16	0.25	1.10	59	55	1	0	1	1	0	0	1	6.8	3.4
17	0.53	1.37	59	48	4	2	1	2	1	0	1	18.6	6.8
18	0.74	1.43	58	40	8	2	5	1	1	0	1	31.0	5.2
19	0.49	1.01	59	45	5	5	2	2	0	0	0	23.7	3.4
20	0.75	1.73	59	45	5	2	2	2	0	0	3	23.7	8.5
21	0.12	0.90	59	58	0	0	0	0	0	0	1	1.7	1.7
22	0.64	1.35	59	42	9	2	2	3	0	0	1	28.8	6.8
23	0.34	0.75	59	46	8	4	0	1	0	0	0	22.0	1.7
24	0.51	1.17	59	46	6	2	1	3	1	0	0	22.0	6.8
25	0.22	0.69	59	51	6	0	1	1	0	0	0	13.6	1.7
26	0.41	1.22	59	50	4	1	1	2	0	0	1	15.3	5.1
27	0.98	1.49	59	34	10	5	5	4	0	0	1	42.4	8.5
28	0.33	1.09	58	49	6	1	0	1	0	0	1	15.5	3.4
29	0.56	1.28	59	45	6	2	4	1	0	0	1	23.7	3.4
30	0.71	1.57	59	44	6	1	4	2	0	0	2	25.4	6.8

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
31	0.02	0.13	59	58	1	0	0	0	0	0	0	1.7	0.0
32	1.08	1.94	59	40	5	2	3	5	1	0	3	32.2	15.3
33	1.54	2.17	59	32	7	4	4	4	4	0	4	45.8	20.3
34	0.93	1.61	59	40	4	5	3	5	1	0	1	32.2	11.9
35	0.71	1.34	59	43	4	4	3	4	1	0	0	27.1	8.5
36	0.27	1.07	59	54	1	1	2	0	0	0	1	8.5	1.7
37	0.41	1.14	59	48	5	4	0	1	0	0	1	18.6	3.4
38	0.28	0.89	58	52	1	2	1	2	0	0	0	10.3	3.4
39	0.53	1.48	57	47	4	1	2	1	0	0	2	17.5	5.3
40	1.10	1.48	59	31	11	6	4	5	2	0	0	47.5	11.9
41	0.68	1.35	59	43	6	3	2	3	2	0	0	27.1	8.5
42	0.75	1.44	59	42	6	2	5	3	0	0	1	28.8	6.8
43	0.41	1.09	59	47	6	4	1	0	0	0	1	20.3	1.7
44	2.24	2.06	59	19	8	4	9	13	2	1	3	67.8	32.2
45	0.22	1.06	59	56	0	1	0	1	0	0	1	5.1	3.4
46	0.59	1.32	59	43	9	2	1	3	0	0	1	27.1	6.8
47	0.12	0.45	59	54	4	0	1	0	0	0	0	8.5	0.0
48	0.47	1.44	59	51	1	3	1	1	0	0	2	13.6	5.1
49	0.37	0.99	59	49	5	1	1	3	0	0	0	16.9	5.1
50	0.07	0.41	59	57	1	0	1	0	0	0	0	3.4	0.0
51	0.14	0.47	59	53	5	0	1	0	0	0	0	10.2	0.0
52	4.53	2.24	60	5	2	6	1	19	4	2	21	91.7	76.7
53	1.88	2.35	60	29	6	6	1	11	0	1	6	51.7	30.0
54	2.80	2.30	60	16	4	9	5	14	4	1	7	73.3	43.3
55	0.45	1.13	60	50	3	1	2	4	0	0	0	16.7	6.7
56	1.44	2.15	59	34	6	3	7	2	2	1	4	42.4	15.3
57	1.52	1.90	60	28	9	7	6	5	2	1	2	53.3	16.7
58	0.03	0.18	60	58	2	0	0	0	0	0	0	3.3	0.0
59	0.35	0.91	60	50	5	0	4	1	0	0	0	16.7	1.7
60	0.73	1.42	60	42	6	6	2	2	1	0	1	30.0	6.7
61	0.53	1.28	59	45	7	4	0	1	1	0	1	23.7	5.1
62	0.63	1.37	60	45	5	4	2	3	0	0	1	25.0	6.7
63	0.83	1.52	60	41	7	2	4	5	0	0	1	31.7	10.0
64	2.53	2.55	60	24	4	3	5	11	3	2	8	60.0	40.0
65	2.05	2.34	60	25	9	2	8	7	2	1	6	58.3	26.7

150

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
66	1.15	1.87	60	36	9	3	4	3	2	1	2	40.0	13.3
67	4.37	2.08	59	4	3	2	7	19	6	2	16	93.2	72.9
68	4.31	2.19	59	5	4	3	4	17	6	6	14	91.5	72.9
69	3.42	2.42	60	12	5	5	5	14	5	4	10	80.0	55.0
70	0.70	1.53	60	45	4	4	4	1	0	0	2	25.0	5.0
71	1.67	2.31	60	32	6	5	5	3	2	2	5	46.7	20.0
72	4.33	2.23	60	7	2	3	7	18	10	2	16	88.3	76.7
73	0.19	0.75	59	54	3	0	0	2	0	0	0	8.5	3.4
74	0.78	1.35	59	39	6	7	5	1	0	0	1	33.9	3.4
75	0.92	1.42	59	34	11	6	4	3	0	0	1	42.4	6.8
76	0.54	1.28	59	45	7	2	2	2	0	0	1	23.7	5.1
77	0.39	0.99	59	49	4	1	3	2	0	0	0	16.9	3.4
78	2.10	1.92	59	13	18	6	7	8	3	2	2	78.0	25.4
79	0.69	1.43	59	42	7	5	0	3	1	0	1	28.8	8.5
80	0.47	0.98	59	44	8	3	2	2	0	0	0	25.4	3.4
81	0.53	1.31	59	46	6	3	1	1	1	0	1	22.0	5.1
82	0.36	1.39	58	53	1	1	0	1	0	0	2	8.6	5.2
83	0.29	0.69	59	48	7	2	2	0	0	0	0	18.6	0.0
84	1.07	1.76	59	36	9	2	5	4	1	0	2	39.0	11.9
85	0.34	1.02	59	51	3	2	0	2	1	0	0	13.6	5.1
86	0.47	1.25	59	47	7	0	2	2	0	0	1	20.3	5.1
87	0.14	0.60	59	55	2	1	0	1	0	0	0	6.8	1.7
88	0.37	1.41	59	53	3	0	0	0	1	0	2	10.2	5.1
89	1.73	2.08	60	24	11	10	4	2	5	0	4	60.0	18.3
90	1.14	2.09	59	39	5	6	2	1	1	0	5	33.9	11.9
91	2.41	2.34	59	20	6	7	7	8	3	2	6	66.1	32.2
92	1.75	2.51	59	32	7	4	4	1	2	1	8	45.8	20.3
93	1.88	2.35	59	27	8	6	3	6	2	1	6	54.2	25.4
94	0.88	1.88	59	44	4	3	1	2	2	0	3	25.4	11.9
95	0.37	1.30	59	53	1	1	2	0	0	1	1	10.2	3.4
96	1.25	2.00	59	37	4	5	4	3	2	2	2	37.3	15.3
97	2.95	2.44	58	13	7	10	2	13	2	1	10	77.6	44.8
98	0.24	0.79	59	51	6	0	1	0	1	0	0	13.6	1.7
99	0.71	1.17	59	37	12	4	2	4	0	0	0	37.3	6.8
100	1.48	1.97	58	29	8	7	3	5	3	1	2	50.0	19.0

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
101	3.15	2.47	59	15	4	5	5	15	3	2	10	74.6	50.8
102	1.71	2.29	59	31	7	2	4	7	3	0	5	47.5	25.4
103	0.49	1.49	59	51	2	1	1	2	0	0	2	13.6	6.8
104	0.34	0.95	59	50	4	2	0	3	0	0	0	15.3	5.1
105	0.08	0.33	59	55	3	1	0	0	0	0	0	6.8	0.0
106	0.34	1.17	59	51	5	0	1	0	1	0	1	13.6	3.4
107	0.44	1.20	59	48	5	2	2	1	0	0	1	18.6	3.4
108	0.68	1.57	59	45	6	0	4	2	0	0	2	23.7	6.8
109	0.28	1.20	58	53	3	0	0	0	0	1	1	8.6	3.4
110	2.10	2.27	59	22	9	6	5	9	1	2	5	62.7	28.8
111	0.37	1.42	59	54	1	1	0	0	1	0	2	8.5	5.1
112	0.44	1.21	59	49	3	3	2	1	0	0	1	16.9	3.4
113	0.08	0.53	59	57	1	0	0	1	0	0	0	3.4	1.7
114	0.98	1.79	59	39	5	7	2	3	0	0	3	33.9	10.2
115	0.59	1.31	58	43	8	1	3	2	0	0	1	25.9	5.2
116	1.29	2.05	59	34	9	3	5	3	0	1	4	42.4	13.6
117	4.34	2.52	59	5	8	3	4	12	2	3	22	91.5	66.1
118	3.30	2.39	60	8	11	7	4	13	5	0	12	86.7	50.0
119	4.70	2.12	60	4	2	4	2	16	10	2	20	93.3	80.0
120	4.54	2.44	59	6	4	2	7	10	4	3	23	89.8	67.8
121	4.25	2.59	60	8	7	1	4	11	6	1	22	86.7	66.7
122	2.88	2.55	59	16	9	5	3	9	5	3	9	72.9	44.1
123	3.90	2.74	59	11	6	4	5	6	5	2	20	81.4	55.9
124	3.83	2.70	60	11	7	4	3	9	4	4	18	81.7	58.3
125	4.98	1.96	59	2	2	3	1	20	6	2	23	96.6	86.4
126	3.75	2.61	60	9	8	5	6	8	4	3	17	85.0	53.3
127	4.42	2.08	59	3	3	4	7	18	4	3	17	94.9	71.2
128	3.65	2.57	60	10	8	4	5	10	4	5	14	83.3	55.0
129	1.83	2.45	58	27	10	5	4	3	0	1	8	53.4	20.7
130	3.48	2.66	58	13	7	2	5	10	4	3	14	77.6	53.4
131	4.08	2.32	59	6	5	4	5	16	4	4	15	89.8	66.1
132	4.42	2.38	59	4	7	4	3	11	7	3	20	93.2	69.5
133	3.78	2.39	59	7	5	9	4	13	4	3	14	88.1	57.6
134	0.91	1.75	58	38	11	0	2	4	0	1	2	34.5	12.1
135	1.35	2.17	54	32	7	4	1	4	1	1	4	40.7	18.5

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
136	4.30	2.40	60	8	4	1	3	16	6	5	17	86.7	73.3
137	2.75	2.33	60	13	12	4	8	11	3	1	8	78.3	38.3
138	3.83	2.56	60	10	7	3	3	11	7	4	15	83.3	61.7
139	3.75	2.59	60	10	7	5	3	11	5	3	16	83.3	58.3
140	4.46	2.27	59	6	2	4	3	16	6	4	18	89.8	74.6
141	4.03	2.49	60	7	8	1	7	13	3	3	18	88.3	61.7
142	2.72	2.71	60	20	11	1	3	9	3	1	12	66.7	41.7
143	5.03	2.18	60	4	3	1	1	17	4	4	26	93.3	85.0
144	4.23	2.51	60	8	5	3	3	13	5	4	19	86.7	68.3
145	4.73	2.29	60	6	2	2	2	17	4	5	22	90.0	80.0
146	4.17	2.30	60	5	6	2	8	16	4	1	18	91.7	65.0
147	4.42	2.35	60	4	6	5	4	13	2	7	19	93.3	68.3
148	3.77	2.55	60	9	8	4	4	11	5	4	15	85.0	58.3
149	3.97	2.58	60	9	7	3	3	13	4	3	18	85.0	63.3
150	4.61	2.26	59	5	2	5	1	18	3	5	20	91.5	78.0
151	4.07	2.50	60	6	8	3	7	13	1	2	20	90.0	60.0
152	3.83	2.67	60	10	7	4	5	10	4	0	20	83.3	56.7
153	2.35	2.61	60	21	14	3	2	5	5	0	10	65.0	33.3
154	1.45	2.09	60	28	15	4	5	2	0	1	5	53.3	13.3
155	4.45	2.32	60	3	6	4	8	12	3	2	22	95.0	65.0
156	3.63	2.55	60	9	10	2	5	14	3	1	16	85.0	56.7
157	3.95	2.65	60	10	6	3	6	10	3	2	20	83.3	58.3
158	3.52	2.65	60	11	8	6	5	9	2	3	16	81.7	50.0
159	2.52	2.44	60	14	16	7	3	8	1	2	9	76.7	33.3
160	5.33	2.12	60	4	2	0	3	10	6	6	29	93.3	85.0
161	0.35	0.83	60	47	9	2	0	2	0	0	0	21.7	3.3
162	4.02	2.15	60	4	2	11	6	18	2	2	15	93.3	61.7
163	4.38	2.12	60	4	1	6	8	17	4	2	18	93.3	68.3
164	1.68	2.11	60	25	14	4	5	5	2	1	4	58.3	20.0
165	0.88	1.67	60	41	7	3	2	5	0	0	2	31.7	11.7
166	4.18	2.12	60	4	4	5	5	20	4	4	14	93.3	70.0
167	1.57	1.96	60	28	10	5	4	8	2	1	2	53.3	21.7
168	4.15	2.48	60	9	3	4	3	16	3	4	18	85.0	68.3
169	4.00	2.22	60	5	6	4	6	17	6	2	14	91.7	65.0
170	3.23	2.53	60	11	11	4	6	9	6	0	13	81.7	46.7

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
171	3.65	2.29	60	8	6	4	7	16	6	1	12	86.7	58.3
172	1.63	1.97	60	28	7	8	3	9	2	1	2	53.3	23.3
173	3.58	2.12	60	7	4	8	6	18	6	2	9	88.3	58.3
174	1.33	1.87	60	30	11	7	3	5	0	2	2	50.0	15.0
175	3.13	2.54	60	14	8	5	5	9	5	4	10	76.7	46.7
176	2.63	2.41	59	17	8	7	4	11	2	3	7	71.2	39.0
177	3.32	2.59	60	12	10	4	3	12	2	5	12	80.0	51.7
178	2.95	2.63	60	17	9	3	3	12	2	3	11	71.7	46.7
179	3.48	2.53	60	11	9	2	4	15	2	5	12	81.7	56.7
180	2.20	2.37	60	23	9	3	6	10	1	2	6	61.7	31.7
181	4.29	2.34	59	5	5	5	5	10	8	4	17	91.5	66.1
182	4.03	2.21	60	6	1	10	5	14	8	2	14	90.0	63.3
183	3.50	2.36	60	6	12	6	2	16	3	4	11	90.0	56.7
184	3.32	2.29	60	7	13	2	7	15	5	1	10	88.3	51.7
185	3.47	2.43	60	11	6	3	8	15	2	3	12	81.7	53.3
186	3.22	2.54	60	10	13	5	3	11	3	3	12	83.3	48.3
187	4.17	2.11	60	5	3	4	6	19	7	2	14	91.7	70.0
188	4.07	2.14	60	4	5	4	8	19	3	3	14	93.3	65.0
189	3.90	2.38	60	5	8	7	5	12	4	4	15	91.7	58.3
190	3.72	2.20	60	7	4	6	6	22	1	2	12	88.3	61.7
191	3.75	2.34	59	7	6	5	7	15	4	1	14	88.1	57.6
192	0.48	0.97	60	43	12	0	3	2	0	0	0	28.3	3.3
193	1.07	1.78	60	37	10	0	5	5	1	0	2	38.3	13.3
194	2.33	2.15	60	18	9	6	6	14	1	2	4	70.0	35.0
195	3.57	2.26	60	6	10	3	7	18	2	3	11	90.0	56.7
196	3.62	2.30	60	6	6	10	6	16	1	1	14	90.0	53.3
197	3.56	2.28	59	7	7	6	6	17	2	3	11	88.1	55.9
198	3.47	2.24	60	7	8	6	6	18	2	3	10	88.3	55.0
199	3.63	2.29	60	9	4	5	8	15	5	3	11	85.0	56.7
200	2.97	2.56	60	15	11	2	4	12	3	3	10	75.0	46.7
201	2.32	1.98	60	14	14	4	7	16	1	1	3	76.7	35.0
202	3.07	2.55	60	16	8	2	2	17	2	3	10	73.3	53.3
203	2.19	2.23	59	18	13	7	2	11	0	4	4	69.5	32.2
204	2.98	2.40	60	12	10	6	5	14	2	1	10	80.0	45.0
205	3.25	2.52	60	15	6	2	5	14	3	6	9	75.0	53.3

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
206	3.87	2.38	60	7	8	3	4	14	7	4	13	88.3	63.3
207	3.68	2.35	60	10	4	3	6	19	3	3	12	83.3	61.7
208	3.82	2.35	60	9	4	2	8	18	3	2	14	85.0	61.7
209	4.00	2.08	60	3	6	5	6	23	2	1	14	95.0	66.7
210	4.13	2.25	60	5	5	4	7	16	3	5	15	91.7	65.0
211	3.97	2.48	60	8	6	5	2	16	2	5	16	86.7	65.0
212	4.28	2.19	58	5	1	8	3	18	3	5	15	91.4	70.7
213	4.25	2.19	60	5	3	5	4	20	4	3	16	91.7	71.7
214	3.38	2.27	60	8	5	11	7	14	2	2	11	86.7	48.3
215	4.62	2.40	60	8	1	2	4	13	5	6	21	86.7	75.0
216	4.82	2.22	60	4	4	2	1	16	7	3	23	93.3	81.7
217	4.77	2.45	60	8	2	0	3	14	5	2	26	86.7	78.3
218	5.05	2.27	60	5	3	0	2	14	6	2	28	91.7	83.3
219	5.22	2.22	60	5	2	0	2	13	4	5	29	91.7	85.0
220	5.13	2.24	60	6	1	0	2	14	4	6	27	90.0	85.0
221	4.92	2.15	60	5	1	2	3	13	9	5	22	91.7	81.7
222	4.38	2.40	60	8	2	2	6	13	6	4	19	86.7	70.0
223	4.83	2.21	60	5	2	1	5	13	8	3	23	91.7	78.3
224	4.75	2.20	60	4	3	2	5	16	3	5	22	93.3	76.7
225	4.73	2.19	60	5	3	1	2	17	7	5	20	91.7	81.7
226	4.32	2.33	60	7	3	2	6	15	5	5	17	88.3	70.0
227	4.52	2.25	60	5	4	3	3	14	8	5	18	91.7	75.0
228	3.57	2.20	60	7	5	10	4	14	8	3	9	88.3	56.7
229	4.63	2.18	60	4	3	1	8	16	4	3	21	93.3	73.3
230	4.83	2.05	60	3	2	2	6	15	8	2	22	95.0	78.3
231	3.67	2.43	60	9	6	5	6	14	4	2	14	85.0	56.7
232	4.47	2.29	60	4	6	3	3	15	7	2	20	93.3	73.3
233	4.48	2.14	60	4	4	2	5	17	7	4	17	93.3	75.0
234	4.35	2.21	60	7	2	0	7	18	5	6	15	88.3	73.3
235	3.52	2.29	60	7	7	7	10	9	8	0	12	88.3	48.3
236	4.62	2.08	60	4	2	2	5	20	5	3	19	93.3	78.3
237	4.30	2.20	60	5	5	1	5	19	6	3	16	91.7	73.3
238	4.82	2.16	60	4	1	4	3	19	3	2	24	93.3	80.0
239	4.45	2.24	60	5	4	2	3	21	3	3	19	91.7	76.7
240	4.48	2.09	60	3	3	3	8	19	3	2	19	95.0	71.7

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
241	4.68	2.10	60	3	3	3	6	14	8	3	20	95.0	75.0
242	4.88	2.11	60	3	3	2	4	16	5	4	23	95.0	80.0
243	4.30	2.38	60	7	3	3	7	13	4	5	18	88.3	66.7
244	5.30	2.14	60	4	2	1	1	13	4	[illegible]	29	93.3	86.7
245	3.25	2.26	60	11	6	4	9	14	6	2	8	81.7	50.0
246	2.35	2.57	60	25	6	4	5	[illegible]	2	3	8	58.3	33.3
247	4.28	2.24	60	5	4	2	10	14	4	4	17	91.7	65.0
248	3.47	2.36	60	8	9	5	6	14	4	3	11	86.7	53.3
249	5.14	2.12	59	4	2	1	2	13	5	8	24	93.2	84.7
250	2.53	2.40	59	20	6	4	8	9	3	3	6	66.1	35.6
251	4.03	2.14	60	5	4	3	10	18	4	2	14	91.7	63.3
252	1.68	2.26	60	31	9	2	2	7	3	3	3	48.3	26.7
253	4.65	2.10	60	6	1	0	4	18	8	7	16	90.0	81.7
254	4.77	1.95	60	2	4	0	5	19	8	3	19	96.7	81.7
255	4.73	2.14	60	5	2	1	4	15	9	5	19	91.7	80.0
256	4.95	2.00	60	2	3	2	3	19	3	6	22	96.7	83.3
257	4.55	2.06	60	2	3	6	5	17	6	2	19	96.7	73.3
258	4.07	2.11	60	6	3	2	6	25	2	3	13	90.0	71.7
259	3.88	2.18	60	8	1	4	8	22	3	1	13	86.7	65.0
260	2.73	2.29	59	18	3	5	8	14	4	1	6	69.5	42.4
261	3.90	2.36	60	8	6	3	3	16	8	3	13	86.7	66.7
262	4.20	1.94	60	5	2	1	9	18	11	4	10	91.7	71.7
263	4.48	2.05	60	2	5	3	5	19	6	3	17	96.7	75.0
264	2.02	2.18	60	23	10	3	8	8	3	1	4	61.7	26.7
265	1.30	1.90	60	32	11	4	4	3	2	3	1	46.7	15.0
266	1.88	2.19	60	27	8	2	7	8	3	2	3	55.0	26.7
267	1.70	2.19	60	29	8	4	6	7	1	0	5	51.7	21.7
268	4.50	2.07	60	3	4	3	3	22	4	4	17	95.0	78.3
269	1.57	2.16	60	29	12	3	5	4	1	2	4	51.7	18.3
270	4.7[illegible]	2.21	60	6	1	1	5	14	6	7	20	90.0	78.3
271	4.18	2.38	60	7	5	3	4	14	6	5	16	88.3	68.3
272	[illegible].63	1.24	60	41	12	1	2	2	2	0	0	31.7	6.7
273	[illegible].59	2.44	59	17	10	4	8	6	5	1	8	71.2	33.9
274	[illegible].92	2.12	60	4	7	4	7	17	6	4	11	93.3	63.3
275	4.18	2.47	60	8	3	6	3	14	4	3	19	86.7	66.7

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
276	4.03	2.37	60	5	7	6	5	13	5	2	17	91.7	61.7
277	4.00	2.51	60	8	6	5	2	15	4	2	18	86.7	65.0
278	3.30	2.64	60	11	13	3	2	13	2	1	15	81.7	51.7
279	3.82	2.32	60	7	6	5	3	21	2	2	14	88.3	65.0
280	2.12	2.36	59	24	8	5	2	12	1	1	6	59.3	33.9
281	4.45	2.19	60	4	4	4	3	19	4	4	18	93.3	75.0
282	3.83	2.54	60	10	7	2	2	16	5	2	16	83.3	65.0
283	3.25	2.41	60	10	9	7	4	14	3	2	11	83.3	50.0
284	4.20	2.29	60	4	7	4	5	15	5	3	17	93.3	66.7
285	4.15	2.40	60	5	8	4	3	15	3	5	17	91.7	66.7
286	3.52	2.37	60	8	8	6	6	13	5	2	12	86.7	53.3
287	4.18	2.38	60	7	5	3	3	16	5	5	16	88.3	70.0
288	2.27	2.39	60	20	12	5	4	8	3	1	7	66.7	31.7
289	4.03	2.41	60	7	6	4	3	17	3	4	16	88.3	66.7
290	4.30	2.35	60	5	7	2	5	13	4	8	16	91.7	68.3
291	3.68	2.32	59	8	6	5	3	19	4	2	12	86.4	62.7
292	3.47	2.47	58	11	6	4	4	16	4	0	13	81.0	56.9
293	4.28	2.25	58	6	3	3	4	17	7	2	16	89.7	72.4
294	2.80	2.64	59	17	10	5	2	11	1	1	12	71.2	42.4
295	3.03	2.28	60	10	10	6	7	15	2	1	9	83.3	47.0
296	2.73	2.52	60	19	6	4	9	8	2	3	9	68.3	36.7
297	3.73	2.24	60	6	8	3	5	21	3	2	12	90.0	63.3
298	3.32	2.50	60	11	10	2	7	13	2	3	12	81.7	50.0
299	3.35	2.46	60	10	9	4	8	12	3	1	13	83.3	48.3
300	2.15	2.31	59	20	11	6	7	6	2	0	7	66.1	25.4
301	4.73	1.89	60	1	2	3	9	18	4	4	19	98.3	75.0
302	2.68	2.60	60	19	9	4	5	9	1	3	10	68.3	38.3
303	3.07	2.52	59	15	7	3	7	11	3	3	10	74.6	45.8
304	2.53	2.51	60	20	9	3	7	8	3	1	9	66.7	35.0
305	4.75	2.31	60	3	5	5	3	12	3	5	24	95.0	73.3
306	4.63	2.21	60	4	3	4	4	16	3	6	20	93.3	75.0
307	3.39	2.60	59	12	9	3	5	9	4	5	12	79.7	50.8
308	4.83	2.15	60	4	3	2	2	17	3	9	20	93.3	81.7
309	4.10	2.28	60	4	6	6	6	16	3	2	17	93.3	63.3
310	1.93	2.07	60	25	7	4	8	8	5	1	2	58.3	26.7

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
311	4.60	2.48	60	7	4	2	3	12	4	5	23	88.3	73.3
312	3.75	2.72	59	11	9	1	5	9	2	5	17	81.4	55.9
313	3.93	2.61	60	9	8	3	3	11	4	5	17	85.0	61.7
314	2.57	2.46	60	21	6	3	7	11	2	3	7	65.0	38.3
315	3.83	2.48	60	9	6	3	7	12	4	4	15	85.0	58.3
316	4.82	2.19	60	4	4	1	2	17	5	5	22	93.3	81.7
317	2.25	2.36	60	17	16	5	7	3	3	2	7	71.7	25.0
318	3.13	2.58	60	15	9	1	6	11	3	5	10	75.0	48.3
319	2.10	2.30	60	24	8	6	2	11	3	1	5	60.0	33.3
320	4.42	2.50	60	7	5	3	3	12	4	5	21	88.3	70.0
321	4.53	2.19	60	5	3	2	4	17	8	2	19	91.7	76.7
322	3.72	2.50	60	8	9	3	7	11	4	3	15	86.7	55.0
323	3.15	2.39	60	10	10	6	7	12	2	3	10	83.3	45.0
324	4.07	2.17	60	6	4	1	10	17	5	4	13	90.0	65.0
325	3.49	2.34	59	9	8	2	7	15	5	3	10	84.7	55.9
326	4.53	2.22	60	6	2	1	5	19	4	4	19	90.0	76.7
327	4.38	2.18	60	5	3	2	8	15	7	3	17	91.7	70.0
328	4.77	2.26	60	5	4	0	2	18	5	3	23	91.7	81.7
329	3.90	2.32	60	6	5	6	9	13	3	3	15	90.0	56.7
330	2.72	2.33	60	15	10	3	9	11	2	2	7	75.0	38.3
331	2.69	2.48	59	15	13	3	4	12	1	2	9	74.6	40.7
332	4.57	2.17	60	5	3	1	3	21	5	3	19	91.7	80.0
333	4.17	2.50	60	9	4	2	5	13	6	2	19	85.0	66.7
334	3.51	2.79	59	14	6	5	5	6	4	1	18	76.3	49.2
335	1.90	2.24	60	26	8	5	8	3	5	0	5	56.7	21.7
336	2.93	2.56	59	14	11	4	6	8	2	4	10	76.3	40.7
337	4.52	2.26	60	5	3	3	5	16	6	1	21	91.7	73.3
338	4.45	2.36	60	7	3	2	4	14	7	4	19	88.3	73.3
339	3.70	2.55	60	8	9	6	4	11	3	3	16	86.7	55.0
340	3.77	2.64	60	9	9	4	5	9	4	2	18	85.0	55.0
341	4.75	2.11	60	3	4	1	4	19	4	4	21	95.0	80.0
342	3.13	2.55	60	14	9	4	1	16	4	0	12	76.7	53.3
343	3.35	2.37	60	10	7	6	6	14	5	1	11	83.3	51.7
344	3.85	2.42	60	10	5	0	7	15	7	2	14	83.3	63.3
345	4.30	2.20	60	5	4	2	7	17	5	4	16	91.7	70.0

TASK	MEAN	SD	N	NUMBER OF RESPONSES PER CATEGORY								% PART OF JOB	% SIG PART
				0	1	2	3	4	5	6	7		
346	3.93	2.43	60	8	6	2	7	14	5	2	16	86.7	61.7
347	4.63	2.07	60	3	4	1	7	14	9	4	18	95.0	75.0
348	2.92	2.75	59	22	3	2	7	7	4	2	12	62.7	42.4
349	2.88	2.81	59	22	5	2	6	5	4	2	13	62.7	40.7
350	1.84	2.30	58	28	7	4	1	11	2	0	5	51.7	31.0
351	2.86	2.80	59	22	5	2	6	6	3	2	13	62.7	40.7
352	2.80	2.82	59	22	7	3	2	7	2	4	12	62.7	42.4
353	2.51	2.75	59	24	8	1	6	4	3	2	11	59.3	33.9
354	1.98	2.68	59	31	7	3	2	2	3	2	9	47.5	27.1
355	2.39	2.72	59	25	7	5	3	2	5	2	10	57.6	32.2
356	2.31	2.57	59	24	6	7	5	3	4	1	9	59.3	28.8
357	2.78	2.56	59	19	5	4	10	6	3	2	10	67.8	35.6
358	2.15	2.41	59	23	7	10	3	4	4	1	7	61.0	27.1
359	2.27	2.46	59	23	6	8	4	6	3	2	7	61.0	30.5
360	2.37	2.58	59	24	6	5	5	4	5	2	8	59.3	32.2
361	2.25	2.54	59	24	8	4	6	4	3	2	8	59.3	28.8
362	2.85	2.54	59	16	8	7	4	7	5	3	9	72.9	40.7
363	4.23	2.28	60	6	3	5	4	17	6	2	17	90.0	70.7
364	4.15	2.39	60	6	5	6	5	11	6	4	17	90.0	63.3
365	3.62	2.35	60	7	6	10	4	14	4	2	13	88.3	55.0
366	4.00	2.54	60	7	7	7	3	10	4	4	18	88.3	60.0
367	3.61	2.48	59	10	6	3	9	11	4	2	14	83.1	52.5
368	3.93	2.28	60	6	5	5	7	16	5	1	15	90.0	61.7
369	2.69	2.61	58	21	5	5	1	12	3	2	9	63.8	44.8
370	1.21	1.85	58	33	10	2	4	5	2	0	2	43.1	15.5
371	3.67	2.64	60	9	10	5	3	11	2	3	17	85.0	55.0
372	1.48	1.97	60	28	12	5	5	5	1	1	3	53.3	16.7
373	3.41	2.66	59	11	8	9	2	10	0	4	15	81.4	49.2
374	3.00	2.42	60	13	8	6	7	13	1	2	10	78.3	43.3
375	3.05	2.33	60	12	7	6	9	14	0	3	9	80.0	43.3
376	2.55	2.12	60	16	7	5	10	15	0	3	4	73.3	36.7
377	2.60	2.42	60	18	9	5	3	14	2	1	8	70.0	41.7
378	0.92	1.54	60	36	12	3	4	3	0	1	1	40.0	8.3
379	0.67	1.42	60	43	10	0	2	3	0	2	0	28.3	8.3
380	3.35	2.64	60	13	9	3	4	12	2	3	14	78.3	51.7
TOTALS:				7814	2305	1311	1562	3791	1135	787	3915		

Table C-4

Frequency of Task Performance (Q3 and Q4)[a]

Question 3: Frequency of Performance (Workers)

How often have you been performing each of the activities done by you (as checked in Question 1)?

Categories and Values of the Response Scale:

1 = Have done, but don't normally do (0+).
2 = Less than once a year (Y-).
3 = Once a year (1Y).
4 = Once a month (1M).
5 = Once a week (1W).
6 = Once a day (1D).
7 = Several times each work day (D+).

} on the average, over the last several months

Question 4: Frequency of Performance (Supervisors)

From your experience as a supervisor of one or more Automotive Mechanics, judge about how often a typical Automotive Mechanic in your operation should perform each of the activities you checked (in Question 2):

Categories and Values of the Response Scale: Identical to those of Question 3.

Each of the 27 columns of Table C-4 is identified below.

Column 46: Average (median) of worker ratings, considering only those who checked (Question 1) that the task was performed.

Column 47: Quartile deviation showing degree of response variability.

Column 48: Number of workers rating the task (Question 3).

Columns 49, 50 and 51: Average, quartile deviation, and number of supervisors rating the task (Question 4), considering only those who checked (Question 2) that the task should be performed.

---

[a] Questions 3 and 4 were answered only for those tasks checked on Q1 and Q2.

Table C-4-continued

Column 52:	Difference between worker and supervisor average ratings (Column 46 minus Column 49).
Column 53 through 60:	Number of workers using each level of the frequency scale. Column 53 (None) is the complement of the number of workers checking the task on Question 1, as recorded in Column 1 on Table C-1.
Column 61:	Percent of workers who do the task (Question 1), but report it performed less frequently than once a year (combining scale categories Y- and O+).
Column 62:	Percent of workers who do the task (Question 1) and report it performed once a week or more often (combining scale categories 1W, 1D, and D+).
Columns 63 through 72:	Same as Columns 53 through 62, but for supervisors' ratings. Column 63 (None) is the complement of that portion of Column 8 (Table C-1) represented by the 39 supervisors in Group 2.

TASK INVENTORY DATA SUMMARY
AUTO MECHANICS -- COMPOSITE

TABLE 4: FREQUENCY OF TASK PERFORMANCE
(Q3 & Q4)

TASK	ACTUAL WORKER FREQUENCY			SUPERVISOR FREQUENCY DESIRE			D:W-S	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE								PERF <1Y	PERF >=1W	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY								DES <1Y	DES >=1W
	MDN	Q	N	MDN	Q	N	MDN	NONE	0+	Y-	1Y	1M	1W	1D	D+	%	%	NONE	0+	Y-	1Y	1M	1W	1D	D+	%	%
1	3.0	1.5	7	4.0	0.9	6	-1.0	53	3	0	1	2	1	0	0	42.9	14.3	32	1	0	1	2	2	0	0	16.7	33.3
2	1.0	0.3	2	4.3	1.4	3	-3.3	58	2	0	0	0	0	0	0	99.9	0.0	35	0	0	0	2	0	0	1	0.0	33.3
3	5.0	1.6	19	4.3	1.0	25	0.7	40	3	1	1	3	3	3	5	21.1	57.9	12	3	0	3	8	5	0	6	12.0	44.0
4	4.3	2.0	11	4.0	1.9	17	0.3	48	2	0	2	2	1	0	4	18.2	45.5	21	5	0	1	5	3	1	2	29.4	35.3
5	4.0	0.3	1	4.8	1.9	3	-0.8	59	0	0	0	1	0	0	0	0.0	0.0	35	1	0	0	0	2	0	0	33.3	66.7
6	3.5	1.1	14	3.2	0.9	16	0.3	45	2	2	3	4	2	1	0	28.6	21.4	21	2	1	7	2	3	1	0	18.8	25.0
7	5.2	0.5	6	4.7	0.9	9	0.5	54	0	0	1	0	3	2	0	0.0	83.3	28	1	0	1	2	3	2	0	11.1	55.6
8	5.0	1.6	5	4.0	1.5	4	1.0	55	1	0	1	0	1	2	0	20.0	60.0	34	1	0	0	2	0	1	0	25.0	25.0
9	0.0	0.0	0	4.5	0.8	4	-4.5	60	0	0	0	0	0	0	0	0.0	0.0	34	0	0	1	1	2	0	0	0.0	50.0
10	4.5	1.8	12	4.1	0.9	11	0.4	48	3	0	1	2	5	0	1	25.0	50.0	27	2	0	1	4	2	0	2	18.2	36.4
11	3.0	1.1	5	4.7	1.1	7	-1.7	54	1	1	1	2	0	0	0	40.0	0.0	31	0	0	3	0	3	1	0	0.0	57.1
12	2.5	1.0	4	4.0	0.8	6	-1.5	56	1	1	1	0	1	0	0	50.0	25.0	32	0	0	2	2	2	0	0	0.0	33.3
13	4.9	0.4	8	4.9	0.4	8	0.0	52	0	0	0	2	5	1	0	0.0	75.0	30	1	0	0	1	5	0	1	12.5	75.0
14	6.0	1.3	32	6.0	1.4	25	0.0	28	3	0	1	5	5	4	14	9.4	71.9	12	2	0	2	4	2	5	10	8.0	68.0
15	3.8	0.5	26	4.0	0.4	23	-0.2	34	1	1	6	16	2	0	0	7.7	7.7	11	0	0	5	14	4	0	0	0.0	17.4
16	6.0	0.3	1	3.8	0.3	4	2.2	59	0	0	0	0	0	1	0	0.0	99.9	34	0	0	1	3	0	0	0	0.0	0.0
17	3.8	1.4	7	3.8	1.0	10	-0.1	53	1	0	2	2	0	2	0	14.3	28.6	28	2	0	2	3	3	0	0	20.0	30.0
18	3.7	0.7	10	4.0	0.8	14	-0.3	50	2	0	2	5	0	0	1	20.0	10.0	24	1	1	2	6	2	0	2	14.3	28.6
19	3.5	1.5	2	3.0	0.9	8	0.5	58	0	0	1	0	0	1	0	0.0	50.0	30	1	2	2	3	0	0	0	37.5	0.0
20	6.2	0.3	4	4.0	0.4	5	2.2	56	0	0	0	0	0	3	1	0.0	99.9	33	1	0	0	3	0	0	1	20.0	20.0
21	1.5	2.0	2	1.5	2.0	4	0.0	58	1	0	0	0	1	0	0	50.0	50.0	34	2	0	0	0	2	0	0	50.0	50.0
22	6.6	1.4	7	6.9	0.3	5	-0.3	53	1	0	0	1	1	0	4	14.3	71.4	32	0	0	0	0	1	0	4	0.0	99.9
23	5.0	0.3	3	6.1	0.6	9	-1.1	57	0	0	0	0	3	0	0	0.0	99.9	29	1	0	0	0	1	4	3	11.1	88.9
24	4.0	0.4	5	2.3	1.5	9	1.8	55	1	0	0	3	0	1	0	20.0	20.0	29	3	2	1	1	0	1	1	55.6	22.2
25	6.0	2.9	5	6.0	1.8	10	0.0	55	2	0	0	0	0	1	2	40.0	60.0	28	0	0	3	1	0	2	4	0.0	60.0
26	1.3	1.4	3	3.3	1.1	9	-2.0	57	2	0	0	1	0	0	0	66.7	0.0	28	0	3	2	2	0	2	0	33.3	22.2
27	6.6	0.7	17	6.8	0.5	17	-0.2	42	2	0	0	1	1	4	9	11.8	82.4	20	0	0	0	0	2	3	12	0.0	99.9
28	3.8	0.5	6	4.1	0.5	7	-0.3	53	0	0	2	3	0	0	1	0.0	16.7	31	0	1	0	4	1	1	0	14.3	28.6
29	6.0	2.8	7	6.8	1.8	12	-0.8	53	2	0	0	0	1	1	3	28.6	71.4	26	2	0	0	1	0	0	9	16.7	75.0
30	7.0	0.3	1	5.5	2.7	8	1.5	59	0	0	0	0	0	0	1	0.0	99.9	28	3	0	0	0	1	2	2	37.5	62.5

TASK	ACTUAL WORKER FREQUENCY MDN	Q	N	SUPERVISOR FREQUENCY DESIRE MDN	Q	N	D:W-S MDN	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE NONE	0+	Y-	1Y	1M	1W	1D	D+	PERF <1Y %	PERF >=1W %	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY NONE	0+	Y-	1Y	1M	1W	1D	D+	DES <1Y %	DES >=1W %
31	0.0	0.0	0	6.5	0.5	4	-6.5	60	0	0	0	0	0	0	0	0.0	0.0	33	0	0	0	0	0	2	2	0.0	99.9
32	4.3	1.1	8	6.6	1.5	12	-2.4	52	0	1	0	4	0	2	1	12.5	37.5	26	1	0	0	3	0	1	7	8.3	66.7
33	4.0	0.8	10	5.3	0.9	14	-1.3	49	1	0	2	4	2	1	0	10.0	30.0	24	0	0	0	4	4	4	2	0.0	71.4
34	3.8	0.8	5	4.0	0.8	17	-0.3	55	1	0	1	2	1	0	0	20.0	20.0	21	2	0	3	7	3	0	2	11.8	29.4
35	4.3	0.4	3	4.4	0.5	12	-0.1	57	0	0	0	2	1	0	0	0.0	33.3	25	0	0	0	7	5	0	0	0.0	41.7
36	0.0	0.0	0	4.5	1.0	6	-4.5	60	0	0	0	0	0	0	0	0.0	0.0	32	0	0	1	2	1	2	0	0.0	50.0
37	5.0	0.3	1	3.8	0.4	3	1.3	58	0	0	0	0	1	0	0	0.0	99.9	35	0	0	1	2	0	0	0	0.0	0.0
38	0.0	0.0	0	5.0	1.1	10	-5.0	60	0	0	0	0	0	0	0	0.0	0.0	28	1	0	1	2	2	4	0	10.0	60.0
39	3.8	0.8	5	4.2	1.1	11	-0.4	55	1	0	1	2	0	1	0	20.0	20.0	26	1	0	1	5	1	1	2	9.1	36.4
40	2.7	0.9	15	4.0	2.1	19	-1.3	44	4	2	7	2	0	0	0	40.0	0.0	19	4	2	2	3	2	2	4	31.6	42.1
41	2.5	1.5	8	4.0	0.3	16	-1.5	52	2	2	0	2	0	2	0	50.0	25.0	21	2	0	0	12	1	0	1	12.5	12.5
42	3.0	0.9	9	4.8	0.5	6	-1.8	50	1	2	3	2	1	0	0	33.3	11.1	32	0	0	0	2	3	1	0	0.0	66.7
43	3.0	1.0	4	4.9	0.9	14	-1.9	54	1	0	2	1	0	0	0	25.0	0.0	23	2	0	1	2	5	4	0	14.3	64.3
44	4.9	0.8	17	6.3	1.2	21	-1.3	42	2	0	0	4	6	3	2	11.8	64.7	17	1	0	2	2	4	2	10	4.8	76.2
45	1.5	1.0	4	3.0	0.3	4	-1.5	56	2	0	2	0	0	0	0	50.0	0.0	34	0	0	4	0	0	0	0	0.0	0.0
46	4.3	1.4	7	6.7	0.7	10	-2.3	53	1	0	0	3	1	0	2	14.3	42.9	28	1	0	0	0	1	2	6	10.0	90.0
47	4.0	0.3	1	5.0	2.4	7	-1.0	59	0	0	0	1	0	0	0	0.0	0.0	31	2	0	0	1	1	2	1	28.6	57.1
48	5.3	0.6	5	6.3	0.6	10	-1.0	55	0	0	0	1	2	2	0	0.0	80.0	28	1	0	0	0	1	4	4	10.0	90.0
49	6.0	1.6	9	6.8	0.4	11	-0.8	51	2	0	0	1	1	1	4	22.2	66.7	27	1	0	0	0	0	2	8	9.1	90.9
50	1.5	2.5	2	0.0	0.0	0	1.5	58	1	0	0	0	0	1	0	50.0	50.0	38	0	0	0	0	0	0	0	0.0	0.0
51	6.0	2.5	4	6.6	0.6	9	-0.6	56	1	0	0	0	0	2	1	25.0	75.0	28	0	0	0	0	1	3	5	0.0	99.9
52	6.6	0.8	44	6.8	0.4	29	-0.2	14	1	0	0	6	4	9	24	2.3	84.1	7	0	0	0	1	2	5	21	0.0	96.6
53	5.3	0.9	15	6.7	1.2	13	-1.4	45	1	0	0	1	7	2	4	6.7	86.7	25	0	0	0	3	1	1	8	0.0	76.9
54	6.6	0.9	30	6.0	1.3	19	0.6	27	0	1	0	2	6	5	16	3.3	90.0	19	1	2	1	1	2	3	7	15.8	73.7
55	0.0	0.0	0	3.5	1.5	4	-3.5	60	0	0	0	0	0	0	0	0.0	0.0	33	1	0	1	1	1	0	0	25.0	25.0
56	6.6	0.6	17	6.8	0.5	16	-0.2	42	0	0	0	0	3	5	9	0.0	99.9	22	0	0	0	1	1	3	11	0.0	93.8
57	5.9	1.1	25	6.8	0.3	17	-0.9	34	1	0	1	4	3	8	8	4.0	76.0	21	2	1	0	0	0	1	13	17.6	82.4
58	4.0	0.3	1	4.0	0.4	10	0.0	59	0	0	0	1	0	0	0	0.0	0.0	28	0	2	0	6	2	0	0	20.0	20.0
59	3.3	0.4	3	4.0	0.4	12	-0.8	56	0	0	2	1	0	0	0	0.0	0.0	24	2	0	0	8	2	0	0	16.7	16.7
60	4.5	1.9	6	5.9	1.1	16	-1.4	52	1	0	1	1	0	1	2	16.7	50.0	22	0	0	0	4	2	5	5	0.0	75.0
61	4.0	0.3	1	3.9	0.3	12	0.1	59	0	0	0	1	0	0	0	0.0	0.0	25	0	0	2	10	0	0	0	0.0	0.0
62	4.5	0.5	4	4.6	0.8	13	-0.1	56	0	0	0	2	2	0	0	0.0	50.0	25	1	0	2	3	5	1	1	7.7	53.8
63	5.9	0.4	8	5.0	1.1	14	0.9	52	0	0	0	1	1	5	1	0.0	87.5	24	1	0	0	5	2	4	2	7.1	57.1
64	5.2	1.3	24	5.7	1.7	25	-0.5	36	0	0	3	5	6	3	7	0.0	66.7	13	1	2	5	1	2	7	7	12.0	64.0
65	4.9	1.0	19	5.2	1.6	24	-0.3	41	1	0	2	4	6	3	3	5.3	63.2	14	2	0	6	2	3	6	5	8.3	58.3

TASK	ACTUAL WORKER FREQUENCY MDN	Q	N	SUPERVISOR FREQUENCY DESIRE MDN	Q	N	D:W-S MDN	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE NONE	0+	Y-	1Y	1M	1W	1D	D+	PERF <1Y %	PERF >=1W %	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY NONE	0+	Y-	1Y	1M	1W	1D	D+	DES <1Y %	DES >=1W %
66	4.8	1.1	21	4.0	1.8	17	0.8	39	2	0	4	2	8	3	2	9.5	61.9	21	4	0	3	3	2	1	4	23.5	41.2
67	5.3	0.7	48	5.9	1.3	34	-0.6	11	0	0	0	7	20	13	8	0.0	85.4	4	0	0	0	11	3	7	13	0.0	67.6
68	6.2	0.8	48	6.6	1.0	32	-0.4	11	0	0	0	2	12	15	19	0.0	95.8	5	0	0	0	7	2	6	17	0.0	78.1
69	6.4	0.8	36	6.4	1.0	30	0.0	24	0	1	0	4	5	9	17	2.8	86.1	8	0	0	0	6	3	7	14	0.0	80.0
70	4.8	0.3	4	4.3	0.9	7	0.5	56	0	0	0	1	3	0	0	0.0	75.0	31	1	0	0	3	1	2	0	14.3	42.9
71	4.5	0.8	12	6.0	1.4	19	-1.5	48	2	0	0	4	4	1	1	16.7	50.0	19	0	0	0	7	2	1	9	0.0	63.2
72	6.3	0.8	40	6.8	0.8	33	-0.5	19	0	0	2	2	7	12	17	0.0	90.0	5	1	1	1	5	0	3	22	6.1	75.8
73	7.0	0.3	1	5.0	1.8	3	2.0	59	0	0	0	0	0	0	1	0.0	99.9	35	0	0	1	0	1	0	1	0.0	66.7
74	4.1	0.5	10	5.0	0.5	12	-0.9	49	1	0	1	5	3	0	0	10.0	30.0	26	1	0	0	2	6	2	1	8.3	75.0
75	4.3	1.9	7	4.9	0.8	12	-0.6	53	2	0	0	2	2	0	1	28.6	42.9	26	2	0	0	2	5	1	2	16.7	66.7
76	0.0	0.0	0	4.1	0.4	9	-4.1	60	0	0	0	0	0	0	0	0.0	0.0	29	1	0	0	6	1	1	0	11.1	22.2
77	3.5	0.5	2	3.7	1.4	10	-0.2	58	0	0	1	1	0	0	0	0.0	0.0	28	3	0	1	5	1	0	0	30.0	10.0
78	4.2	0.7	22	4.1	1.7	21	0.1	36	2	0	2	10	4	3	1	9.1	36.4	15	3	3	0	7	2	4	2	28.6	38.1
79	0.0	0.0	0	4.0	1.5	8	-4.0	60	0	0	0	0	0	0	0	0.0	0.0	30	2	0	0	4	0	1	1	25.0	25.0
80	5.0	0.3	1	4.4	1.3	7	0.6	59	0	0	0	0	1	0	0	0.0	99.9	31	0	0	0	4	1	0	2	0.0	42.9
81	0.0	0.0	0	4.0	0.4	6	-4.0	60	0	0	0	0	0	0	0	0.0	0.0	32	1	0	0	4	0	0	1	16.7	16.7
82	0.0	0.0	0	4.3	1.3	5	-4.3	60	0	0	0	0	0	0	0	0.0	0.0	33	1	0	0	2	0	1	1	20.0	40.0
83	0.0	0.0	0	6.0	0.4	5	-6.0	60	0	0	0	0	0	0	0	0.0	0.0	33	0	0	0	1	0	3	1	0.0	80.0
84	3.5	1.3	4	3.3	1.4	13	0.2	56	1	0	1	2	0	0	0	25.0	0.0	25	4	0	3	4	1	0	1	30.8	15.4
85	0.0	0.0	0	4.5	2.0	4	-4.5	60	0	0	0	0	0	0	0	0.0	0.0	33	1	0	0	1	1	1	0	25.0	50.0
86	0.0	0.0	0	4.1	0.4	9	-4.1	60	0	0	0	0	0	0	0	0.0	0.0	29	0	1	0	6	1	1	0	11.1	22.2
87	0.0	0.0	0	3.8	0.5	8	-3.8	60	0	0	0	0	0	0	0	0.0	0.0	29	0	0	3	4	0	0	1	0.0	12.5
88	0.0	0.0	0	5.5	2.4	6	-5.5	60	0	0	0	0	0	0	0	0.0	0.0	32	1	1	0	0	1	1	2	33.3	66.7
89	3.4	1.0	19	5.3	1.6	19	-1.9	40	3	2	5	5	1	2	1	26.3	21.1	19	2	1	2	3	2	4	5	15.8	57.9
90	5.0	1.9	11	6.8	0.5	19	-1.8	49	2	1	0	2	1	4	1	27.3	54.5	19	0	0	1	2	0	3	13	0.0	84.2
91	6.7	1.0	31	6.8	0.5	25	-0.1	29	3	0	1	2	3	3	19	9.7	80.6	13	0	0	0	3	1	3	18	0.0	88.0
92	6.4	0.6	11	6.0	0.9	18	0.4	49	2	0	0	0	0	4	5	18.2	81.8	20	2	0	0	1	3	6	6	11.1	83.3
93	6.7	0.5	16	6.2	0.8	18	0.5	44	1	0	0	1	0	4	10	6.3	87.5	20	3	0	0	0	2	6	7	16.7	83.3
94	6.0	0.3	2	6.6	1.2	9	-0.6	57	0	0	0	0	0	2	0	0.0	99.9	29	0	0	0	2	2	0	5	0.0	77.8
95	7.0	0.3	1	1.5	1.5	2	5.5	59	0	0	0	0	0	0	1	0.0	99.9	36	1	0	0	1	0	0	0	50.0	0.0
96	6.0	1.4	14	6.8	1.4	10	-0.8	46	1	1	0	3	0	4	5	14.3	64.3	28	1	0	0	2	0	0	7	10.0	70.0
97	6.9	0.3	36	6.9	0.3	28	-0.0	23	1	0	0	1	0	6	28	2.8	94.4	10	0	0	0	0	2	4	22	0.0	99.9
98	5.0	0.3	1	6.8	0.4	3	-1.8	59	0	0	0	0	1	0	0	0.0	99.9	35	0	0	0	0	0	1	2	0.0	99.9
99	6.0	0.5	4	5.5	0.7	8	0.5	56	0	0	0	0	1	2	1	0.0	99.9	30	1	0	0	0	3	3	1	12.5	87.5
100	6.6	0.8	20	6.7	0.6	19	-0.1	40	1	0	0	1	3	4	11	5.0	90.0	19	0	0	0	2	1	4	12	0.0	89.5

TASK	ACTUAL WORKER FREQUENCY MDN	Q	N	SUPERVISOR FREQUENCY DESIRE MDN	Q	N	D:W-S MDN	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE NONE	0+	Y-	1Y	1M	1W	1D	D+	PERF <1Y %	PERF >=1W %	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY NONE	0+	Y-	1Y	1M	1W	1D	D+	DES <1Y %	DES >=1W %
101	6.8	0.4	33	6.4	0.7	24	0.4	25	0	0	0	0	0	9	24	0.0	99.9	14	0	0	0	0	5	8	11	0.0	99.9
102	4.3	1.2	18	6.8	0.7	17	-2.5	42	2	0	2	6	2	3	3	11.1	44.4	21	1	0	0	3	0	1	12	5.9	76.5
103	4.5	0.5	2	4.0	2.1	5	0.5	58	0	0	0	1	1	0	0	0.0	50.0	32	1	0	1	1	0	0	2	20.0	40.0
104	5.8	0.8	5	6.3	0.6	7	-0.6	55	0	0	0	1	1	2	1	0.0	80.0	31	1	0	0	0	0	3	3	14.3	85.7
105	4.0	0.3	2	5.5	0.5	2	-1.5	58	0	0	0	2	0	0	0	0.0	0.0	36	0	0	0	0	1	1	0	0.0	99.9
106	3.5	1.1	6	6.3	1.4	9	-2.8	54	1	0	2	0	3	0	0	16.7	50.0	29	1	0	0	2	0	2	4	11.1	66.7
107	5.0	2.4	6	6.2	0.5	14	-1.2	54	2	0	0	0	2	1	1	33.3	66.7	24	1	0	0	0	1	7	5	7.1	92.9
108	5.8	1.7	7	6.5	0.6	10	-0.8	53	1	0	1	1	0	2	2	14.3	57.1	28	0	0	0	0	1	4	5	0.0	99.9
109	0.0	0.0	0	1.5	1.6	6	-1.5	60	0	0	0	0	0	0	0	0.0	0.0	32	3	0	0	2	0	1	0	50.0	16.7
110	5.9	0.6	11	6.8	0.6	19	-0.9	49	1	0	0	1	1	6	2	9.1	81.8	19	1	0	0	3	0	2	13	5.3	78.9
111	0.0	0.0	0	5.0	0.5	4	-5.0	60	0	0	0	0	0	0	0	0.0	0.0	33	0	0	0	1	2	1	0	0.0	75.0
112	6.0	0.3	1	6.2	2.7	8	-0.2	59	0	0	0	0	0	1	0	0.0	99.9	30	2	0	0	0	0	3	3	25.0	75.0
113	4.0	0.3	1	1.3	1.4	3	2.8	59	0	0	0	1	0	0	0	0.0	0.0	35	2	0	0	1	0	0	0	66.7	0.0
114	6.0	0.9	5	6.7	0.6	13	-0.7	55	0	0	0	0	2	1	2	0.0	99.9	25	2	0	0	0	0	3	8	15.4	84.6
115	6.2	0.3	4	6.8	0.4	10	-0.6	56	0	0	0	0	0	3	1	0.0	99.9	28	0	0	0	0	0	3	7	0.0	99.9
116	6.0	0.8	6	6.0	0.9	6	0.0	54	0	0	0	0	2	2	2	0.0	99.9	32	0	0	0	1	1	2	2	0.0	83.3
117	4.6	0.7	55	5.0	1.4	36	-0.4	5	3	0	3	19	19	8	3	5.5	54.5	0	1	1	3	9	8	3	11	5.6	61.1
118	4.5	0.7	45	4.9	1.0	36	-0.4	15	2	1	4	16	15	3	4	6.7	48.9	1	1	1	4	8	11	5	6	5.6	61.1
119	5.2	0.8	50	6.2	1.3	36	-1.0	9	2	0	2	7	19	11	9	4.0	78.0	1	1	0	4	5	3	7	16	2.8	72.2
120	4.5	0.7	53	5.0	0.8	36	-0.5	7	3	0	2	22	18	6	2	5.7	49.1	2	0	1	2	8	14	7	4	2.8	69.4
121	4.4	0.7	51	4.4	0.8	35	-0.0	8	3	1	6	18	18	1	4	7.8	45.1	2	1	1	5	12	9	5	2	5.7	45.7
122	3.8	0.7	35	3.7	1.0	29	0.1	25	6	0	7	15	5	1	1	17.1	20.0	8	7	0	6	9	4	1	2	24.1	24.1
123	4.1	0.8	45	4.3	0.8	37	-0.3	15	7	1	5	17	12	2	1	17.8	33.3	1	2	1	4	14	8	5	3	8.1	43.2
124	4.0	0.8	42	4.2	0.9	36	-0.2	16	5	1	7	17	10	1	1	14.3	28.6	2	2	0	9	10	10	2	3	5.6	41.7
125	5.5	0.8	53	6.2	1.1	38	-0.7	7	0	0	0	3	23	13	14	0.0	94.3	0	0	0	0	3	5	6	7	17	0.0	78.9
126	4.0	0.9	45	4.2	0.9	33	-0.2	14	5	2	9	15	13	2	1	15.6	35.6	5	3	1	5	11	8	2	3	12.1	39.4
127	4.1	0.7	52	4.6	1.1	38	-0.6	8	0	2	12	21	12	4	1	3.8	32.7	0	0	3	4	11	7	7	6	7.9	52.6
128	4.0	0.9	44	4.2	1.0	34	-0.2	16	6	0	10	13	13	1	1	13.6	34.1	3	2	2	7	9	9	2	3	11.8	41.2
129	2.8	1.1	21	3.1	1.1	20	-0.3	39	5	4	5	5	2	0	0	42.9	9.5	17	4	3	5	5	1	1	1	35.0	15.0
130	4.8	0.8	47	5.2	1.3	27	-0.4	13	0	0	5	15	14	11	2	0.0	57.4	11	1	0	5	4	5	7	5	3.7	63.0
131	4.4	0.7	48	4.9	1.1	32	-0.5	12	1	0	4	20	13	7	3	2.1	47.9	6	1	0	5	7	7	7	5	3.1	59.4
132	5.7	0.8	54	6.3	1.2	36	-0.6	6	0	0	1	5	17	18	13	0.0	88.9	2	1	0	1	7	2	9	16	2.8	75.0
133	4.8	0.7	36	5.0	1.5	36	-0.2	20	1	0	3	9	15	6	2	2.8	63.9	2	1	1	6	6	8	2	12	5.6	61.1
134	3.6	1.3	11	3.5	1.6	14	0.1	49	3	0	2	6	0	0	0	27.3	0.0	24	6	0	1	5	0	1	1	42.9	14.3
135	3.4	0.6	13	3.7	0.9	14	-0.3	47	1	1	5	5	0	1	0	15.4	7.7	24	3	0	3	5	2	0	2	21.4	21.4

TASK	ACTUAL WORKER FREQUENCY MDN	Q	N	SUPERVISOR FREQUENCY DESIRE MDN	Q	N	D:W-S MDN	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE NONE	0+	Y-	1Y	1M	1W	1D	D+	PERF <1Y %	PERF >=1W %	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY NONE	0+	Y-	1Y	1M	1W	1D	D+	DES <1Y %	DES >=1W %
136	4.0	0.9	49	4.3	0.8	36	-0.3	11	7	0	10	16	14	2	0	14.3	32.7	2	1	3	4	13	10	1	4	11.1	41.7
137	3.4	1.3	38	4.1	1.0	30	-0.7	22	9	3	8	10	8	0	0	31.6	21.1	7	2	2	7	7	8	1	3	13.3	40.0
138	3.7	0.9	47	4.1	0.9	35	-0.4	13	5	3	12	15	10	2	0	17.0	25.5	3	1	2	8	11	8	2	3	8.6	37.1
139	3.5	0.9	46	3.9	1.0	34	-0.4	14	7	1	14	13	9	2	0	17.4	23.9	3	2	3	8	9	8	1	3	14.7	35.3
140	4.0	0.4	52	4.3	1.0	38	-0.3	6	0	1	9	31	10	1	0	1.9	21.2	0	1	3	5	12	7	7	3	10.5	44.7
141	3.2	0.7	49	3.7	1.0	36	-0.5	11	5	7	19	12	5	1	0	24.5	12.2	2	3	5	8	10	6	1	3	22.2	27.8
142	2.8	0.9	44	3.3	1.2	31	-0.5	16	10	6	19	6	3	0	0	36.4	6.8	7	5	4	8	6	5	0	3	29.0	25.8
143	5.5	0.9	53	5.8	1.1	38	-0.2	7	0	0	2	8	16	13	14	0.0	81.1	0	1	1	1	5	9	7	14	5.3	78.9
144	4.2	0.7	49	4.3	0.7	35	-0.1	9	4	1	7	17	17	3	0	10.2	40.8	3	1	2	3	14	10	2	3	8.6	42.9
145	5.0	0.6	52	5.6	1.0	38	-0.6	8	0	0	0	14	23	10	5	0.0	73.1	0	1	0	4	5	8	13	7	2.6	73.7
146	3.7	0.6	49	3.9	0.9	34	-0.2	11	3	3	14	23	5	1	0	12.2	12.2	3	2	2	9	11	6	1	3	11.8	29.4
147	4.2	1.0	50	4.3	1.1	35	-0.1	9	5	2	9	13	16	4	1	14.0	42.0	2	3	0	7	9	7	6	3	8.6	45.7
148	3.4	0.7	46	3.4	0.8	35	0.1	14	6	1	17	14	6	2	0	15.2	17.4	3	2	4	13	10	2	2	2	17.1	17.1
149	3.9	0.8	45	4.0	0.9	35	-0.1	15	5	1	10	16	11	2	0	13.3	28.9	3	2	3	7	11	8	1	3	14.3	34.3
150	4.9	0.6	52	5.6	1.0	38	-0.8	8	0	0	1	16	24	7	4	0.0	67.3	0	1	0	5	4	7	14	7	2.6	73.7
151	3.8	0.6	49	3.7	0.7	35	0.1	11	4	0	15	21	5	2	2	8.2	18.4	3	3	3	9	15	2	0	3	17.1	14.3
152	4.0	0.7	45	4.4	0.7	36	-0.4	13	4	4	5	21	9	2	0	17.8	24.4	2	1	1	4	14	12	1	3	5.6	44.4
153	3.0	1.4	33	4.0	0.8	26	-1.0	27	9	4	7	7	5	1	0	39.4	18.2	12	3	2	3	11	4	1	2	19.2	26.9
154	2.0	1.7	23	3.5	1.5	16	-1.5	37	9	5	2	1	5	1	0	60.9	26.1	21	4	2	2	4	1	1	2	37.5	25.0
155	5.1	0.7	55	6.1	1.4	38	-0.9	5	0	2	1	8	26	9	9	3.6	80.0	0	0	0	6	6	2	9	15	0.0	68.4
156	3.8	0.7	47	3.9	0.6	35	-0.1	10	3	2	13	21	6	1	1	10.6	17.0	2	2	1	8	17	4	0	3	8.6	20.0
157	4.1	0.6	40	4.3	0.7	35	-0.2	18	4	1	4	19	12	0	0	12.5	30.0	3	1	1	5	13	11	1	3	5.7	42.9
158	3.0	0.7	45	3.3	0.7	34	-0.3	15	9	3	21	9	3	0	0	26.7	6.7	3	2	4	14	9	2	0	3	17.6	14.7
159	2.7	1.0	39	3.2	1.2	32	-0.4	21	11	5	15	6	2	0	0	41.0	5.1	6	7	5	6	9	2	1	2	37.5	15.6
160	5.2	0.9	54	5.9	1.1	38	-0.7	5	0	0	3	12	17	14	8	0.0	72.2	0	0	0	3	5	8	8	14	0.0	78.9
161	1.4	1.4	11	1.4	1.4	7	0.0	49	6	0	1	4	0	0	0	54.5	0.0	31	4	0	1	1	0	0	1	57.1	14.3
162	4.2	0.6	55	4.1	0.7	36	0.1	4	1	3	5	26	16	4	0	7.3	36.4	1	1	0	6	17	5	2	5	2.8	33.3
163	4.6	0.6	55	4.9	1.0	36	-0.3	4	3	1	3	19	24	5	0	7.3	52.7	1	0	0	3	11	11	4	7	0.0	61.1
164	2.3	0.9	34	2.5	1.3	22	-0.2	26	10	9	10	4	1	0	0	55.9	2.9	16	9	2	5	3	1	0	2	50.0	13.6
165	2.9	1.1	16	2.6	1.1	13	0.3	44	5	0	7	3	1	0	0	31.3	6.3	25	5	1	5	2	0	0	0	46.2	0.0
166	5.0	0.7	54	5.8	1.2	37	-0.8	6	0	0	5	12	22	9	6	0.0	68.5	1	0	1	2	8	5	10	11	2.7	70.3
167	3.3	0.8	34	3.0	1.0	21	0.3	26	6	2	11	11	4	0	0	23.5	11.8	17	3	5	5	7	0	0	1	38.1	4.8
168	5.0	0.7	55	5.7	1.2	36	-0.7	5	1	0	1	14	23	11	5	1.8	70.9	2	0	0	4	8	4	11	9	0.0	66.7
169	4.5	0.6	54	4.9	1.2	38	-0.4	5	1	1	4	21	22	4	1	3.7	50.0	0	0	0	7	10	5	10	6	0.0	55.3
170	4.5	0.7	53	5.0	1.4	37	-0.5	7	2	1	6	18	18	7	1	5.7	49.1	1	1	0	6	9	5	6	10	2.7	56.8

TASK	ACTUAL WORKER FREQUENCY MDN	Q	N	SUPERVISOR FREQUENCY DESIRE MDN	Q	N	D:W-S MDN	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE NONE	0+	Y-	1Y	1M	1W	1D	D+	PERF <1Y %	PERF >=1W %	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY NONE	0+	Y-	1Y	1M	1W	1D	D+	DES <1Y %	DES >=1W %
171	4.4	0.8	50	5.0	1.1	36	-0.6	10	3	1	4	18	14	8	2	8.0	48.0	2	0	1	5	8	8	8	6	2.8	61.1
172	3.7	0.9	33	3.3	1.2	22	0.5	27	7	1	5	15	2	3	0	24.2	15.2	16	4	4	4	6	3	0	1	36.4	18.2
173	4.2	0.6	48	4.8	0.9	37	-0.6	10	5	0	4	22	12	4	1	10.4	35.4	1	0	1	7	6	14	3	6	2.7	62.2
174	2.2	1.0	22	2.1	1.1	17	0.0	38	9	3	8	1	1	0	0	54.5	4.5	21	6	4	3	3	0	0	1	58.8	5.9
175	3.4	0.8	43	3.5	0.6	36	-0.1	16	7	3	13	14	5	1	0	23.3	14.0	2	2	3	13	15	1	1	1	13.9	8.3
176	3.3	0.8	36	3.3	0.7	29	0.0	23	4	3	13	10	5	1	0	19.4	16.7	9	2	1	14	7	4	0	1	10.3	17.2
177	3.7	0.8	51	4.0	0.8	36	-0.3	9	5	5	12	18	9	2	0	19.6	21.6	2	1	4	6	14	10	0	1	13.9	30.6
178	3.6	0.8	47	3.7	1.0	34	-0.1	12	4	4	14	16	7	2	0	17.0	19.1	4	2	7	6	11	7	0	1	26.5	23.5
179	4.3	0.6	51	4.6	0.9	36	-0.3	7	2	0	4	24	18	3	0	3.9	41.2	2	1	1	7	8	12	5	2	5.6	52.8
180	3.0	1.1	35	2.9	0.8	27	0.1	25	9	2	13	9	1	1	0	31.4	5.7	11	3	6	10	7	0	0	1	33.3	3.7
181	3.9	0.6	51	3.8	0.8	35	0.2	8	6	0	9	25	9	2	0	11.8	21.6	1	2	3	9	13	4	3	1	14.3	22.9
182	4.1	0.5	50	4.1	0.9	36	0.0	10	1	0	7	27	12	3	0	2.0	30.0	2	1	2	8	12	7	5	1	8.3	36.1
183	3.5	0.8	48	2.8	0.9	38	0.7	11	8	3	12	21	2	2	0	22.9	8.3	0	9	5	15	7	1	0	1	36.8	5.3
184	3.6	0.7	50	3.7	0.8	37	-0.1	10	4	3	16	21	4	2	0	14.0	12.0	1	4	4	8	14	5	1	1	21.6	18.9
185	4.0	0.7	53	4.2	0.9	35	-0.2	7	1	3	12	22	12	1	2	7.5	28.3	2	2	2	7	9	12	2	1	11.4	42.9
186	3.3	0.7	51	3.3	0.9	35	-0.0	9	6	3	20	18	3	0	1	17.6	7.8	3	4	6	9	11	3	1	1	28.6	14.3
187	4.2	0.7	52	3.8	0.9	37	0.3	7	1	2	9	21	16	2	1	5.8	36.5	1	1	7	6	14	4	4	1	21.6	24.3
188	4.1	0.5	54	4.5	0.8	37	-0.4	6	0	0	10	29	13	1	1	0.0	27.8	1	1	2	5	11	13	3	2	8.1	48.6
189	3.8	0.6	52	3.8	0.6	37	-0.0	7	6	0	14	24	7	1	0	11.5	15.4	1	2	0	12	16	3	3	1	5.4	18.9
190	3.5	0.7	53	3.7	0.9	38	-0.2	7	5	2	19	21	4	1	1	13.2	11.3	0	2	7	6	17	2	3	1	23.7	15.8
191	4.4	0.7	52	4.7	1.0	37	-0.3	8	1	1	4	22	15	7	2	3.8	46.2	1	1	2	2	12	8	7	5	8.1	54.1
192	2.7	1.0	5	1.2	0.4	7	1.5	55	2	0	3	0	0	0	0	40.0	0.0	31	5	1	0	1	0	0	0	85.7	0.0
193	2.3	0.7	7	1.5	1.1	10	0.8	53	1	3	2	1	0	0	0	57.1	0.0	28	5	1	2	1	1	0	0	60.0	10.0
194	3.0	0.8	36	2.6	1.0	30	0.4	24	7	4	15	8	1	1	0	30.6	5.6	8	9	5	10	3	2	0	1	46.7	10.0
195	4.1	0.6	48	4.0	0.9	34	0.1	12	2	1	8	22	14	1	0	6.3	31.3	4	1	4	5	13	6	2	3	14.7	32.4
196	4.4	0.7	51	4.1	1.0	33	0.2	9	1	2	8	17	16	4	1	5.9	45.1	5	3	4	2	12	7	3	2	21.2	36.4
197	4.2	0.7	52	4.1	0.8	37	0.1	8	1	2	8	21	15	3	2	5.8	38.5	1	1	2	7	14	9	2	2	8.1	35.1
198	4.2	0.7	46	4.5	1.0	37	-0.3	13	2	2	5	20	12	3	2	8.7	37.0	1	0	2	6	11	8	5	5	5.4	48.6
199	3.8	0.7	43	4.0	0.8	33	-0.2	17	4	0	13	16	6	4	0	9.3	23.3	5	2	1	8	11	8	1	2	9.1	33.3
200	3.8	0.5	42	3.8	0.7	33	0.1	18	2	1	11	23	2	2	1	7.1	11.9	5	0	4	9	14	3	1	2	12.1	18.2
201	3.1	1.3	27	3.7	1.1	20	-0.6	32	7	1	9	7	0	3	0	29.6	11.1	18	3	3	2	9	3	0	0	30.0	15.0
202	3.2	0.8	33	3.8	0.9	35	-0.6	27	7	0	13	6	4	3	0	21.2	21.2	3	3	5	5	13	8	0	1	22.9	25.7
203	3.2	0.8	37	3.3	0.6	31	-0.1	22	5	5	13	11	2	1	0	27.0	8.1	7	3	3	12	13	0	0	0	19.4	0.0
204	3.9	0.8	44	3.8	1.4	35	0.1	16	5	2	7	18	7	2	3	15.9	27.3	2	2	5	7	10	2	4	5	20.0	31.4
205	3.9	1.1	35	4.0	1.2	35	-0.1	25	4	2	7	11	4	3	4	17.1	31.4	3	1	6	5	10	6	3	4	20.0	37.1

TASK	ACTUAL WORKER FREQUENCY MDN	Q	N	SUPERVISOR FREQUENCY DESIRE MDN	Q	N	D:W-S MDN	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE NONE	0+	Y-	1Y	1M	1W	1D	D+	PERF <1Y %	PERF >=1W %	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY NONE	0+	Y-	1Y	1M	1W	1D	D+	DES <1Y %	DES >=1W %
206	4.4	1.0	44	5.2	1.2	36	-0.8	16	1	0	6	17	8	5	7	2.3	45.5	1	0	1	4	8	7	8	8	2.8	63.9
207	4.0	0.7	42	4.1	0.7	35	-0.1	17	4	0	8	18	7	4	1	9.5	28.6	2	1	2	6	15	5	6	0	8.6	31.4
208	4.1	0.6	45	4.1	0.9	35	-0.0	15	3	0	7	21	9	4	1	6.7	31.1	3	1	3	6	12	7	3	3	11.4	37.1
209	4.1	0.6	51	4.2	0.9	37	-0.1	9	1	0	11	22	13	2	2	2.0	33.3	1	2	1	9	9	15	1	0	8.1	43.2
210	4.5	0.7	47	5.3	1.2	37	-0.8	13	1	0	5	18	14	2	7	2.1	48.9	1	0	0	5	8	7	9	8	0.0	64.9
211	4.4	0.9	46	4.8	1.1	36	-0.4	14	2	1	5	17	10	4	7	6.5	45.7	2	0	2	5	9	7	8	5	5.6	55.6
212	4.8	0.6	57	5.2	1.0	36	-0.4	3	0	0	2	20	24	7	4	0.0	61.4	2	0	2	2	7	10	9	6	5.6	69.4
213	4.2	0.6	56	4.3	0.6	37	-0.0	4	0	0	8	28	12	7	1	0.0	35.7	1	0	3	1	19	9	2	3	8.1	37.8
214	3.4	0.7	50	3.7	0.9	33	-0.3	10	5	3	19	16	6	1	0	16.0	14.0	5	3	6	5	14	3	1	1	27.3	15.2
215	6.3	0.9	54	6.8	0.8	37	-0.4	6	0	0	0	6	10	13	25	0.0	88.9	1	0	0	1	5	3	3	25	0.0	83.8
216	5.2	0.7	56	6.2	0.9	38	-1.0	4	0	0	1	11	24	14	6	0.0	78.6	0	0	0	0	3	12	6	17	0.0	92.1
217	6.0	0.9	57	6.6	1.1	38	-0.6	3	1	0	1	6	11	18	20	1.8	86.0	0	1	0	1	5	7	3	21	2.6	81.6
218	5.6	0.7	55	6.6	0.8	37	-1.0	5	0	0	1	6	18	20	10	0.0	87.3	1	0	0	0	2	8	6	21	0.0	94.6
219	6.2	0.7	55	6.8	0.8	37	-0.6	4	0	0	1	2	11	20	21	0.0	94.5	0	0	0	1	2	6	2	26	0.0	91.9
220	6.2	0.7	55	6.6	0.8	38	-0.4	4	0	0	1	3	11	18	22	0.0	92.7	0	0	0	1	2	7	6	22	0.0	92.1
221	5.3	0.7	56	5.8	0.9	37	-0.5	3	1	0	2	9	20	19	5	1.8	78.6	0	1	0	1	4	10	10	11	2.7	83.8
222	5.8	0.8	49	5.4	1.3	38	0.4	11	0	0	1	5	13	17	13	0.0	87.8	0	0	1	3	7	9	2	16	2.6	71.1
223	5.9	0.9	54	6.5	1.1	38	-0.6	5	0	0	0	10	9	20	15	0.0	81.5	0	0	0	2	7	2	8	19	0.0	76.3
224	5.8	0.8	55	6.5	1.3	36	-0.7	4	0	0	0	7	15	20	13	0.0	87.3	2	0	0	1	9	1	7	18	0.0	72.2
225	4.8	0.6	57	5.5	1.3	38	-0.7	3	0	0	2	18	25	8	4	0.0	64.9	0	0	0	1	12	6	5	14	0.0	65.8
226	4.8	0.8	52	5.3	1.2	37	-0.5	6	0	1	3	18	16	10	4	1.9	57.7	1	0	1	3	10	6	9	8	2.7	62.2
227	4.9	0.7	47	5.0	1.4	37	-0.1	12	0	0	6	10	20	8	3	0.0	66.0	1	1	1	3	10	7	4	11	5.4	59.5
228	3.5	0.7	54	3.7	1.0	36	-0.2	6	4	3	20	19	7	0	1	13.0	14.8	2	1	5	10	10	5	1	4	16.7	27.8
229	4.9	0.8	58	5.5	1.0	37	-0.6	2	0	0	0	20	21	10	7	0.0	65.5	1	1	1	2	7	7	13	6	5.4	70.3
230	4.9	0.5	58	5.3	0.8	38	-0.4	2	0	0	1	16	30	6	5	0.0	70.7	0	1	1	0	8	11	12	5	5.3	73.7
231	4.1	0.8	46	4.7	1.0	33	-0.6	14	4	1	8	17	13	1	2	10.9	34.8	5	3	1	2	9	7	9	2	12.1	54.5
232	4.4	0.6	51	5.2	0.9	37	-0.8	8	2	0	3	24	16	4	2	3.9	43.1	1	1	2	0	8	11	9	6	8.1	70.3
233	4.3	0.6	56	4.6	1.0	36	-0.3	4	0	1	2	30	19	3	1	1.8	41.1	2	1	0	3	13	7	9	3	2.8	52.8
234	5.1	1.1	56	4.3	1.2	37	0.7	3	0	1	9	9	16	11	10	1.8	66.1	1	4	1	2	14	3	6	7	13.5	43.2
235	3.3	0.8	54	3.5	0.7	36	-0.2	4	3	7	20	15	8	1	0	18.5	16.7	2	3	4	11	15	2	0	1	19.4	8.3
236	5.0	0.6	58	5.0	0.6	37	-0.0	2	0	1	0	15	27	10	5	1.7	72.4	1	1	0	2	7	17	6	4	2.7	73.0
237	4.3	0.6	56	4.4	0.8	38	-0.0	3	0	1	9	22	21	2	1	1.8	42.9	0	1	4	2	14	9	6	2	13.2	44.7
238	5.5	0.8	57	6.1	1.0	37	-0.7	2	0	0	0	1	28	13	15	0.0	98.2	1	1	1	1	2	9	7	16	5.4	86.5
239	4.2	0.6	57	4.2	0.8	38	0.0	3	0	0	8	29	17	2	1	0.0	35.1	0	1	1	7	15	7	4	3	5.3	36.8
240	4.1	0.5	57	4.2	0.7	37	-0.1	3	0	0	10	32	11	3	1	0.0	26.3	1	1	0	4	19	7	2	4	2.7	35.1

TASK	ACTUAL WORKER FREQUENCY MDN	Q	N	SUPERVISOR FREQUENCY DESIRE MDN	Q	N	D:W-S MDN	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE NONE	0+	Y-	1Y	1M	1W	1D	D+	PERF <1Y %	PERF >=1W %	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY NONE	0+	Y-	1Y	1M	1W	1D	D+	DES <1Y %	DES >=1W %
241	4.2	0.5	55	4.5	0.7	37	-0.3	4	1	1	5	29	18	1	0	3.6	34.5	1	1	1	3	14	12	3	3	5.4	48.6
242	5.4	0.7	57	5.9	1.0	38	-0.5	3	0	0	0	11	20	18	8	0.0	80.7	0	0	1	1	5	8	10	13	2.6	81.6
243	4.2	0.8	52	4.5	1.5	36	-0.3	7	2	1	12	16	16	2	3	5.8	40.4	2	1	5	4	8	4	7	7	16.7	50.0
244	6.5	0.7	57	6.7	0.8	38	-0.2	3	0	0	0	5	7	16	29	0.0	91.2	0	0	0	1	6	2	5	24	0.0	81.6
245	4.3	1.0	43	4.1	1.1	33	0.1	16	3	1	8	12	11	5	3	9.3	44.2	5	2	1	7	10	5	2	6	9.1	39.4
246	3.7	0.7	37	4.1	0.7	25	-0.4	23	2	2	11	15	5	0	2	10.8	18.9	13	3	1	2	10	7	0	2	16.0	36.0
247	4.7	0.6	56	5.1	0.9	36	-0.4	3	1	3	0	20	23	5	4	7.1	57.1	2	1	0	3	6	14	5	7	2.8	72.2
248	3.6	0.9	52	3.9	1.5	36	-0.3	7	5	7	12	17	8	2	1	23.1	21.2	2	6	5	3	9	7	4	2	30.6	36.1
249	6.4	0.7	56	6.7	0.7	38	-0.3	3	0	0	0	2	11	16	27	0.0	96.4	0	0	0	1	4	3	6	24	0.0	86.8
250	3.1	1.2	24	3.5	1.1	22	-0.4	36	6	2	7	9	0	0	0	33.3	0.0	15	5	1	5	7	2	0	2	27.3	18.2
251	4.6	0.8	49	4.9	1.0	31	-0.4	10	2	1	8	12	19	4	3	6.1	53.1	7	2	3	0	7	8	7	4	16.1	61.3
252	4.0	1.9	14	4.5	2.6	16	-0.5	46	4	2	0	2	4	2	0	42.9	42.9	22	5	0	1	2	3	1	4	31.3	50.0
253	5.0	0.5	55	5.3	1.0	37	-0.4	5	2	0	3	9	29	9	3	3.6	74.5	1	0	[illegible]	4	4	10	10	7	5.4	73.0
254	5.3	0.7	56	6.0	1.0	38	-0.6	4	0	0	0	5	28	12	11	0.0	91.1	0	0	[illegible]	4	4	6	11	13	0.0	78.9
255	5.4	0.8	57	6.2	1.1	38	-0.8	3	0	0	0	8	22	15	12	0.0	86.0	0	0	0	4	5	3	10	16	0.0	76.3
256	5.8	0.8	57	6.5	1.0	38	-0.7	3	0	0	0	5	17	19	16	0.0	91.2	0	0	1	2	5	3	7	20	2.6	78.9
257	4.3	0.6	56	4.6	1.1	38	-0.3	4	0	0	7	27	17	4	1	0.0	39.3	0	1	1	9	7	11	3	6	5.3	52.6
258	4.3	0.7	56	4.0	0.8	37	0.3	4	1	0	10	20	23	2	0	1.8	44.6	1	1	1	9	14	8	2	2	5.4	32.4
259	4.7	0.7	50	4.4	1.1	35	0.3	9	1	0	7	13	21	6	2	2.0	58.0	3	0	0	7	12	5	8	3	0.0	45.7
260	3.4	0.8	24	3.0	1.4	24	0.4	36	4	2	7	8	1	2	0	25.0	12.5	14	6	3	6	4	1	2	2	37.5	20.8
261	5.6	0.8	50	6.2	1.4	38	-0.5	10	2	0	1	5	15	15	12	4.0	84.0	0	0	2	4	5	2	9	16	5.3	71.1
262	5.0	0.7	54	5.9	1.1	37	-0.9	6	0	0	1	14	23	9	7	0.0	72.2	1	0	1	5	3	5	11	12	2.7	75.7
263	4.3	0.5	55	4.5	0.7	37	-0.2	4	0	0	2	34	17	2	0	0.0	34.5	1	1	1	5	12	16	0	2	5.4	48.6
264	2.5	1.0	14	2.7	1.3	22	-0.2	45	5	2	5	2	0	0	0	50.0	0.0	16	8	2	5	5	2	0	0	45.5	9.1
265	1.5	0.8	8	2.2	1.4	16	-0.7	52	4	2	1	1	0	0	0	75.0	0.0	21	6	3	1	4	0	1	1	56.3	12.5
266	2.6	1.1	15	2.7	1.4	19	-0.1	45	6	1	5	3	0	0	0	46.7	0.0	19	6	3	3	4	1	1	1	47.4	15.8
267	1.8	1.0	13	2.3	0.9	18	-0.6	47	6	2	3	0	2	0	0	61.5	15.4	20	4	6	4	1	2	0	1	55.6	16.7
268	4.3	0.6	54	4.6	0.9	34	-0.3	5	2	1	3	27	17	3	1	5.6	38.9	3	1	3	5	7	12	2	4	11.8	52.9
269	1.4	1.4	7	3.2	2.1	16	-1.8	53	4	1	0	1	1	0	0	71.4	14.3	22	5	1	3	2	1	3	1	37.5	31.3
270	5.2	0.6	55	5.9	1.0	36	-0.7	5	0	0	2	7	27	12	7	0.0	83.6	1	0	1	2	5	6	11	11	2.8	77.8
271	5.2	0.7	52	5.8	1.1	38	-0.7	8	1	0	1	10	21	13	6	1.9	76.9	0	0	2	2	5	7	9	13	5.3	76.3
272	1.3	1.0	8	1.1	0.3	12	0.2	52	5	0	3	0	0	0	0	62.5	0.0	26	10	1	1	0	0	0	0	91.7	0.0
273	3.7	1.0	37	4.3	1.5	23	-0.5	22	5	3	8	11	6	3	1	21.6	27.0	15	4	2	1	6	5	3	2	26.1	43.5
274	4.1	0.6	49	4.1	0.9	33	-0.0	10	2	2	5	25	11	3	1	8.2	30.6	5	3	2	4	12	6	3	3	15.2	36.4
275	5.3	1.0	56	5.3	1.5	37	0.0	3	0	0	1	16	14	13	12	0.0	69.6	1	3	1	3	6	7	4	13	10.8	64.9

TASK	ACTUAL WORKER FREQUENCY MDN	Q	N	SUPERVISOR FREQUENCY DESIRE MDN	Q	N	D:W-S MDN	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE NONE	0+	Y-	1Y	1M	1W	1D	D+	PERF <1Y %	PERF >=1W %	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY NONE	0+	Y-	1Y	1M	1W	1D	D+	DES <1Y %	DES >=1W %
276	4.6	0.8	50	5.5	1.4	34	-0.9	9	0	0	1	23	13	4	9	0.0	52.0	4	4	0	2	8	3	7	10	11.8	58.8
277	5.0	0.9	55	5.8	1.3	35	-0.8	4	2	1	1	15	16	13	7	5.5	65.5	3	0	0	3	8	5	5	14	0.0	68.6
278	4.3	0.7	43	4.4	1.0	32	-0.1	16	1	0	7	16	17	1	1	2.3	44.2	5	1	3	3	10	7	5	3	12.5	46.9
279	4.0	0.7	51	4.1	0.9	34	-0.0	8	2	2	10	21	9	6	1	7.8	31.4	4	1	4	4	14	4	5	2	14.7	32.4
280	2.3	1.5	25	3.6	1.4	23	-1.2	35	10	3	3	4	3	0	2	52.0	20.0	15	6	5	0	8	0	1	3	47.8	17.4
281	5.9	0.8	57	6.1	1.1	37	-0.3	3	0	0	0	4	18	18	17	0.0	93.0	1	0	0	1	7	5	9	15	0.0	78.4
282	4.6	0.6	56	4.4	1.2	37	0.1	4	0	0	4	22	25	2	3	0.0	53.6	1	3	3	4	9	7	8	3	16.2	48.6
283	3.6	0.6	51	3.7	1.0	34	-0.2	9	1	0	23	23	2	2	0	2.0	7.8	3	4	3	8	9	7	3	0	20.6	29.4
284	4.5	0.7	56	4.8	1.1	37	-0.3	4	1	0	3	24	19	8	1	1.8	50.0	1	1	3	5	7	10	9	2	10.8	56.8
285	4.7	0.6	57	4.9	1.1	37	-0.2	3	0	0	2	21	25	9	0	0.0	59.6	1	0	2	5	8	8	10	4	5.4	59.5
286	3.4	0.6	53	3.6	0.9	35	-0.2	7	2	1	25	17	7	1	0	5.7	15.1	3	4	5	7	15	3	1	0	25.7	11.4
287	4.4	0.6	56	4.5	1.1	37	-0.2	4	1	0	4	26	20	3	2	1.8	44.6	1	3	3	4	8	10	5	4	16.2	51.4
288	3.4	0.7	45	3.0	1.3	29	0.4	15	5	0	19	14	6	1	0	11.1	15.6	9	8	5	3	10	3	0	0	44.8	10.3
289	4.7	0.7	56	4.8	1.3	37	-0.1	4	0	0	2	21	21	10	2	0.0	58.9	1	1	6	4	3	13	3	7	18.9	62.2
290	4.8	0.7	57	4.8	1.1	37	0.0	3	0	0	2	19	23	8	5	0.0	63.2	1	1	3	4	7	11	4	7	10.8	59.5
291	4.0	0.9	47	4.2	0.9	35	-0.2	12	5	3	8	16	13	2	0	17.0	31.9	3	0	2	6	14	5	4	4	5.7	37.1
292	3.2	0.6	40	3.7	1.0	33	-0.5	20	4	4	18	11	2	1	0	20.0	7.1	5	0	10	4	14	1	1	3	30.3	15.2
293	5.3	0.9	51	6.4	1.4	37	-1.1	9	2	1	0	9	18	11	10	5.9	76.5	1	0	0	3	8	3	5	18	0.0	70.3
294	4.4	0.8	43	4.6	1.4	25	-0.2	17	6	1	3	12	13	3	4	16.3	46.5	13	2	0	5	5	4	4	5	8.0	52.0
295	4.3	0.7	46	5.9	1.4	34	-1.6	14	6	0	4	17	14	2	3	13.0	41.3	3	0	0	4	8	2	8	12	0.0	64.7
296	2.9	0.4	32	3.4	1.3	27	-0.5	27	7	1	18	5	1	0	0	25.0	3.1	11	5	3	6	5	5	3	0	29.6	29.6
297	3.7	0.8	47	3.7	0.9	36	0.0	13	6	3	10	19	8	0	1	19.1	19.1	2	3	5	7	13	5	2	1	22.2	22.2
298	3.9	0.8	44	4.3	1.3	33	-0.4	16	7	1	7	18	10	0	1	18.2	25.0	5	4	2	4	8	6	7	2	18.2	45.5
299	3.5	0.7	44	3.8	1.5	33	-0.3	16	5	2	15	16	6	0	0	15.9	13.6	4	5	3	7	6	4	6	2	24.2	36.4
300	2.7	1.0	30	3.3	1.2	24	-0.7	29	8	5	11	5	1	0	0	43.3	3.3	14	6	1	6	11	0	0	0	29.2	0.0
301	5.2	0.7	53	5.6	1.2	34	-0.4	6	0	1	0	11	20	14	7	1.9	77.4	4	0	2	2	6	6	9	9	5.9	70.6
302	3.6	0.8	37	4.0	0.8	32	-0.4	22	5	3	8	17	4	0	0	21.6	10.8	6	3	2	5	12	7	2	1	15.6	31.3
303	3.6	0.7	38	4.1	0.9	35	-0.5	21	4	3	11	17	2	1	0	18.4	7.9	3	1	4	5	13	7	3	2	14.3	34.3
304	2.8	1.1	24	3.5	1.2	30	-0.7	36	6	4	7	6	1	0	0	41.7	4.2	8	5	2	8	7	1	3	4	23.3	26.7
305	4.9	0.9	56	5.8	1.1	38	-0.8	3	0	1	4	15	18	10	8	1.8	64.3	0	0	0	2	7	8	7	14	0.0	76.3
306	4.5	0.8	56	5.5	1.1	38	-1.0	4	0	0	4	24	13	11	4	0.0	50.0	0	0	0	2	10	7	11	8	0.0	68.4
307	3.7	0.9	41	3.8	1.2	30	-0.2	19	5	4	9	15	4	3	1	22.0	19.5	8	3	0	10	6	4	2	5	10.0	36.7
308	4.8	0.7	54	5.4	1.0	38	-0.6	6	0	1	3	18	19	8	5	1.9	59.3	0	0	1	4	4	11	7	11	2.6	76.3
309	4.1	0.6	53	3.9	0.7	37	0.1	7	1	2	10	24	14	1	1	5.7	30.2	1	1	5	5	17	3	2	4	16.2	24.3
310	3.5	0.8	16	2.7	1.2	20	0.8	44	3	1	4	8	0	0	0	25.0	0.0	18	6	3	5	5	0	1	0	45.0	5.0

	ACTUAL WORKER FREQUENCY			SUPERVISOR FREQUENCY DESIRE			D:W-S	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE								PERF <1Y	PERF >=1W	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY								DES <1Y	DES >=1W
TASK	MDN	Q	N	MDN	Q	N	MDN	NONE	0+	Y-	1Y	1M	1W	1D	D+	%	%	NONE	0+	Y-	1Y	1M	1W	1D	D+	%	%
311	4.8	0.6	52	5.4	1.3	38	-0.6	8	0	0	1	19	21	8	3	0.0	61.5	0	1	4	1	5	9	6	12	13.2	71.1
312	4.4	0.7	37	5.1	1.2	33	-0.7	23	2	0	3	15	10	3	4	5.4	45.9	5	2	3	0	7	8	6	7	15.2	63.6
313	4.8	0.9	41	5.1	1.2	33	-0.4	18	2	0	2	14	10	8	5	4.9	56.1	5	1	2	2	7	7	6	8	9.1	63.6
314	3.2	1.4	21	4.0	1.4	25	-0.8	39	7	0	5	7	1	1	0	33.3	9.5	13	3	1	4	9	0	5	3	16.0	32.0
315	4.6	0.7	51	5.1	1.2	35	-0.5	8	2	2	3	16	20	5	3	7.8	54.9	3	0	2	3	9	6	7	8	5.7	60.0
316	5.5	0.9	55	6.2	1.4	38	-0.7	5	0	0	0	12	16	16	11	0.0	78.2	0	0	0	4	8	3	6	17	0.0	68.4
317	3.3	1.2	29	3.9	2.2	24	-0.6	31	7	1	8	8	2	2	1	27.6	17.2	13	4	3	2	8	0	1	6	29.2	29.2
318	3.8	1.6	34	4.3	1.8	24	-0.5	25	8	2	4	9	7	2	2	29.4	32.4	13	3	2	2	6	2	2	7	20.8	45.8
319	2.9	1.0	18	3.0	1.3	19	-0.1	42	5	0	9	4	0	0	0	27.8	0.0	18	6	1	5	7	0	0	0	36.8	0.0
320	4.8	0.5	50	5.3	1.4	38	-0.4	10	0	1	2	13	29	4	1	2.0	68.0	0	1	3	1	11	4	6	12	10.5	57.9
321	4.1	0.5	53	4.5	0.9	37	-0.3	7	0	0	10	27	14	1	1	0.0	30.2	1	0	3	5	11	9	6	3	8.1	48.6
322	3.7	0.7	46	3.7	0.6	36	0.0	14	2	4	12	21	7	0	0	13.0	15.2	2	1	4	9	18	2	1	1	13.9	11.1
323	3.3	0.7	41	3.6	0.8	36	-0.3	19	5	5	13	15	3	0	0	24.4	7.3	2	4	4	8	16	3	4	0	22.2	11.1
324	3.7	0.6	51	3.8	0.7	38	-0.1	9	2	4	15	24	6	0	0	11.8	11.8	0	1	3	11	16	5	1	1	10.5	18.4
325	3.6	0.7	44	3.8	0.7	32	-0.2	16	5	2	14	19	4	0	0	15.9	9.1	6	1	1	11	11	4	3	1	6.3	25.0
326	4.4	0.7	52	4.2	0.9	38	0.2	7	0	1	7	19	19	5	1	1.9	48.1	0	0	3	6	14	6	3	6	7.9	39.5
327	3.9	0.7	52	4.1	0.6	38	-0.2	8	1	2	15	21	12	1	0	5.8	25.0	0	0	2	7	18	6	2	3	5.3	28.9
328	4.8	0.6	53	5.3	1.4	38	-0.5	6	0	0	2	18	22	8	3	0.0	62.3	0	0	2	5	8	5	8	10	5.3	60.5
329	3.3	0.7	51	3.1	0.7	38	0.2	8	5	2	22	16	5	1	0	13.7	11.8	0	2	7	16	8	1	2	2	23.7	13.2
330	2.9	1.0	32	2.6	0.9	29	0.3	28	7	5	11	8	1	0	0	37.5	3.1	9	6	8	9	3	1	0	2	48.3	10.3
331	3.5	0.8	37	4.0	1.8	30	-0.5	22	5	2	11	13	6	0	0	18.9	16.2	8	4	3	3	10	1	2	7	23.3	33.3
332	4.9	0.6	54	5.5	1.4	38	-0.6	6	0	1	1	16	24	7	5	1.9	66.7	0	0	3	3	6	7	5	14	7.9	68.4
333	5.0	0.9	44	5.9	1.2	36	-0.9	16	1	0	2	12	14	9	6	2.3	65.9	2	1	3	3	2	6	7	14	11.1	75.0
334	4.8	1.1	34	6.0	1.3	34	-1.2	26	5	1	2	6	9	7	4	17.6	58.8	4	4	2	1	2	4	8	13	17.6	73.5
335	3.0	1.5	21	3.6	1.2	24	-0.6	38	5	2	7	1	4	1	1	33.3	28.6	13	4	2	4	7	3	0	3	29.2	25.0
336	3.1	0.8	18	3.7	1.9	27	-0.6	40	3	2	7	5	1	0	0	27.8	5.6	10	5	5	2	7	1	2	5	37.0	29.6
337	5.0	0.8	54	5.9	1.3	38	-0.9	5	0	0	1	15	20	11	7	0.0	70.4	0	0	3	2	6	4	9	14	7.9	71.1
338	4.1	0.7	44	5.9	1.3	35	-1.7	16	4	1	4	20	7	6	2	11.4	34.1	2	1	3	1	5	5	7	13	11.4	71.4
339	4.4	0.9	51	6.0	1.5	37	-1.6	9	5	2	3	18	10	10	3	13.7	45.1	1	0	0	4	10	3	3	17	0.0	62.2
340	4.5	0.9	48	6.4	1.2	37	-1.9	12	8	0	2	14	12	6	6	16.7	50.0	1	0	0	4	5	3	7	18	0.0	75.7
341	5.6	0.9	48	6.4	0.9	37	-0.9	12	0	0	2	9	12	14	11	0.0	77.1	1	1	0	2	5	2	9	18	2.7	78.4
342	3.2	0.7	36	3.3	1.0	31	-0.1	24	5	4	13	13	1	0	0	25.0	2.8	6	4	6	7	10	2	1	1	32.3	12.9
343	3.4	0.8	41	3.7	0.8	35	-0.3	19	5	4	13	14	4	1	0	22.0	12.2	3	1	5	9	13	5	0	2	17.1	20.0
344	3.7	0.8	43	3.6	0.7	36	0.1	16	6	2	10	18	4	3	0	18.6	16.3	2	0	3	14	12	3	2	2	8.3	19.4
345	4.5	0.7	53	5.2	1.4	36	-0.6	6	0	0	9	17	20	5	2	0.0	50.9	1	0	2	4	8	6	6	10	5.6	61.1

TASK	ACTUAL WORKER FREQUENCY MDN	Q	N	SUPERVISOR FREQUENCY DESIRE MDN	Q	N	D:W-S MDN	DISTRIBUTION OF WORKER FREQUENCY OF TASK PERFORMANCE NONE	0+	Y-	1Y	1M	1W	1D	D+	PERF <1Y %	PERF >=1W %	DISTRIBUTION OF SUPERVISOR DESIRES FOR TASK FREQUENCY NONE	0+	Y-	1Y	1M	1W	1D	D+	DES <1Y %	DES >=1W %
346	3.5	0.7	40	4.1	1.0	36	-0.6	20	5	2	13	16	4	0	0	17.5	10.0	2	2	3	6	11	7	5	2	13.9	38.9
347	4.2	0.6	51	4.8	1.2	38	-0.6	9	2	0	5	27	10	5	2	3.9	33.3	0	0	2	6	8	9	7	6	5.3	57.9
348	4.8	0.9	31	5.0	1.2	33	-0.2	29	0	0	4	9	9	5	4	0.0	58.1	5	1	1	2	9	7	6	7	6.1	60.6
349	4.9	0.8	32	5.1	1.2	33	-0.2	28	4	0	1	6	13	4	4	12.5	65.6	5	0	1	3	9	6	6	8	3.0	60.6
350	3.4	0.7	23	3.2	0.7	29	0.3	37	2	2	8	8	3	0	0	17.4	13.0	9	3	3	13	6	4	0	0	20.7	13.8
351	4.8	0.8	30	5.0	1.4	33	-0.2	30	1	0	2	9	10	3	5	3.3	60.0	5	0	4	2	7	7	4	9	12.1	60.6
352	3.6	0.7	34	4.3	1.0	33	-0.7	26	3	2	11	13	1	2	2	14.7	14.7	5	1	4	4	10	7	5	2	15.2	42.4
353	4.1	0.6	30	4.3	1.4	31	-0.2	28	3	1	1	16	5	2	2	13.3	30.0	7	3	3	3	8	3	9	2	19.4	45.2
354	4.4	0.7	26	4.4	1.0	29	-0.0	34	0	0	5	9	9	1	2	0.0	46.2	9	2	3	2	8	6	6	2	17.2	48.3
355	4.1	0.5	26	4.4	1.1	29	-0.4	34	0	0	5	14	5	0	2	0.0	26.9	7	3	2	3	7	7	4	3	17.2	48.3
356	3.1	0.7	27	3.6	0.7	33	-0.6	33	2	5	11	8	1	0	0	25.9	3.7	5	1	5	7	17	1	1	0	21.2	6.1
357	3.4	0.7	34	3.8	0.9	33	-0.4	26	2	4	12	12	4	0	0	17.6	11.8	5	0	5	9	10	6	3	1	12.1	30.3
358	2.7	0.8	26	3.2	0.7	32	-0.5	34	5	6	9	5	1	0	0	42.3	3.8	6	3	5	11	11	1	1	0	25.0	6.3
359	3.3	0.7	29	3.8	0.6	32	-0.5	31	3	4	10	11	1	0	0	24.1	3.4	6	2	5	8	15	3	1	1	12.5	15.6
360	3.6	0.6	28	3.9	0.8	32	-0.3	31	0	2	11	12	3	0	0	7.1	10.7	5	2	5	5	14	5	1	1	18.8	21.9
361	3.8	0.6	23	3.9	1.0	31	-0.2	37	1	2	5	12	3	0	0	13.0	13.0	7	4	2	5	10	8	1	1	19.4	32.3
362	4.1	0.6	33	4.8	0.9	31	-0.7	26	2	0	6	15	6	2	2	6.1	30.3	1	0	1	5	7	10	6	2	3.2	58.1
363	4.5	0.6	54	5.3	1.2	37	-0.9	5	0	0	1	27	18	6	2	0.0	48.1	1	0	0	4	12	3	11	7	0.0	56.8
364	4.4	0.6	53	4.9	1.3	37	-0.4	6	0	1	2	25	19	4	2	1.9	47.2	1	0	2	7	7	7	8	6	5.4	56.8
365	3.3	0.7	52	3.9	1.1	36	-0.5	8	4	4	22	17	5	0	0	15.4	9.6	2	1	6	7	11	4	4	3	19.4	30.6
366	3.8	0.6	53	4.3	1.5	36	-0.4	7	3	0	16	23	9	1	1	5.7	20.8	2	4	6	2	8	8	4	4	27.8	44.4
367	3.6	0.6	51	3.7	1.2	36	-0.1	8	2	3	19	21	5	1	0	9.8	11.8	2	5	7	4	11	7	1	1	33.3	25.0
368	4.1	0.6	52	4.6	1.0	36	-0.5	7	1	2	10	23	13	1	2	5.8	30.8	2	0	3	2	12	9	4	6	8.3	52.8
369	3.4	1.0	39	3.8	1.0	31	-0.3	21	6	5	9	14	4	1	0	28.2	12.8	7	4	4	4	13	2	2	2	25.8	19.4
370	1.9	0.9	15	3.0	1.7	13	-1.1	45	6	4	3	1	1	0	0	66.7	6.7	25	6	0	1	3	2	1	0	46.2	23.1
371	4.4	1.7	47	6.5	1.1	37	-2.2	11	10	2	2	11	9	5	8	25.5	46.8	1	1	1	0	6	4	6	19	5.4	78.4
372	3.6	1.8	17	5.0	1.5	21	-1.4	43	6	1	1	4	2	3	0	41.2	29.4	17	2	2	1	5	1	4	6	19.0	52.4
373	4.4	1.7	44	6.5	1.3	35	-2.1	16	8	3	0	12	6	10	5	25.0	47.7	3	2	0	3	4	2	6	18	5.7	74.3
374	4.3	1.2	37	5.4	1.4	31	-1.1	23	8	1	5	11	10	3	3	24.3	43.2	6	2	0	2	6	6	2	13	6.5	67.7
375	4.8	1.2	39	5.1	1.3	30	-0.4	21	3	2	1	12	6	7	8	12.8	53.8	7	4	0	1	5	8	3	9	13.3	66.7
376	4.4	0.9	37	4.6	1.4	25	-0.2	23	3	1	1	15	7	7	3	10.8	45.9	12	5	0	1	6	6	1	8	20.0	52.0
377	4.4	1.8	31	6.4	1.2	29	-1.9	28	6	1	2	7	5	2	8	22.6	48.4	8	3	0	0	4	4	4	14	10.3	75.9
378	3.4	1.8	17	5.6	2.0	24	-2.3	43	4	1	4	2	2	1	3	29.4	35.3	14	4	2	2	1	2	7	6	25.0	62.5
379	3.3	1.6	9	5.8	1.8	19	-2.5	51	3	0	2	2	0	2	0	33.3	22.2	18	4	0	2	2	0	6	5	21.1	57.9
380	4.7	1.0	46	5.0	1.5	36	-0.3	14	1	0	8	12	12	8	5	2.2	54.3	2	2	3	3	7	6	5	10	13.9	58.3

TOTALS: 10055 4304
877 648

385
1847
3920
3052
1401
1126

597
1316
2570
1619
1301
2004

Table C-5

Time to Qualify (Q7)[a]

Question 7: Time to Qualify (Supervisors)

By your standards as a supervisor of one or more Automotive Mechanics, when do you expect that a new Automotive Mechanic employee should be capable of satisfactorily performing each of the activities you checked? That is, how soon after beginning employment as an Automotive Mechanic do you feel that employees should be able to do each activity with reasonable competency?

Categories and Values of the Response Scale:

1 = Competent performance is never necessary (0).
2 = Some number of years beyond the first 3 (Y+).
3 = Within the first 3 years (3Y).
4 = Within the first year (Y).
5 = Within the first 6 months (6M).
6 = Within the first 3 months (3M).
7 = Within the first month (M).
8 = Within the first week on the job (W).

Each of the 14 columns of Table C-5 is identified below.

Column 73: Average (median) of supervisor ratings, considering only those who checked (Question 2) that the task should be performed.

Column 74: Quartile deviation showing degree of response variability.

Column 75: Number of supervisors rating the task (Question 7).

Column 76 through 84: Number of supervisors using each level of the time scale. Column 76 (None) is the complement of that portion of Column 8 (Table C-1) represented by the 35 supervisors in Group 1.

---

[a] Question 7 was answered only for those tasks checked on Q2.

Table C-5-continued

Column 85:	Percent of supervisors, of those indicating the task should be done (Question 2), who do not expect competent performance during a worker's first year of job experience (combining scale categories 3Y, Y+, and 0).)
Column 86:	Percent of supervisors, of those indicating the task should be done (Question 2), who expect competent performance within a worker first three months of job experience (combining scale categories 3M, M, and W).

TASK INVENTORY DATA SUMMARY
AUTO MECHANICS -- COMPOSITE

TABLE 5: TIME TO QUALIFY (Q7)

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS								% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	0	Y+	3Y	Y	6M	3M	M	W	
1	2.50	1.50	8	25	2	2	1	1	0	1	0	1	62.5	25.0
2	2.50	1.50	4	31	1	1	0	1	0	0	1	0	50.0	25.0
3	3.64	0.81	24	11	0	3	8	7	1	0	3	2	45.8	20.8
4	4.17	1.88	20	14	1	4	3	3	1	4	2	2	40.0	40.0
5	1.00	0.25	2	33	2	0	0	0	0	0	0	0	100.0	0.0
6	2.75	1.19	18	16	4	4	4	3	0	0	1	2	66.7	16.7
7	3.50	2.46	10	25	3	1	1	1	0	2	2	0	50.0	40.0
8	4.25	2.69	7	27	2	0	0	2	0	1	1	1	28.6	42.9
9	3.50	1.17	10	25	1	1	3	2	1	2	0	0	50.0	20.0
10	3.17	1.95	16	19	1	5	3	0	2	2	3	0	56.3	31.3
11	2.50	1.29	10	25	2	3	1	2	0	1	1	0	60.0	20.0
12	2.50	0.73	10	23	1	4	3	0	0	1	1	0	80.0	20.0
13	3.90	1.13	14	21	1	2	2	5	1	0	3	0	35.7	21.4
14	6.20	1.38	25	8	1	1	0	6	1	5	10	1	8.0	64.0
15	7.17	1.44	20	13	3	0	1	0	2	0	6	8	20.0	70.0
16	2.50	1.00	6	29	2	1	2	1	0	0	0	0	83.3	0.0
17	2.33	1.15	9	25	2	3	1	2	0	0	1	0	66.7	11.1
18	4.00	1.67	12	20	1	3	0	4	1	0	3	0	33.3	25.0
19	2.25	1.06	10	23	2	4	1	2	0	1	0	0	70.0	10.0
20	2.17	2.71	10	25	3	3	1	0	0	0	2	1	70.0	30.0
21	2.25	0.97	9	26	3	2	3	1	0	0	0	0	88.9	0.0
22	3.63	1.03	19	15	4	2	3	4	2	3	0	1	47.4	21.1
23	4.00	1.83	10	24	3	1	0	2	3	0	1	0	40.0	10.0
24	3.50	1.54	14	21	3	3	1	3	2	1	1	0	50.0	14.3
25	2.13	0.89	13	21	4	4	3	1	0	0	0	1	84.6	7.7
26	3.75	1.19	7	28	0	2	1	2	1	0	1	0	42.9	14.3
27	6.00	2.00	21	13	2	2	1	1	2	5	1	7	23.8	61.9
28	3.50	1.17	10	24	1	3	1	3	0	1	1	0	50.0	20.0
29	2.00	1.27	19	15	8	3	3	2	0	1	2	0	73.7	15.8
30	3.67	1.40	9	26	2	2	0	3	1	0	1	0	44.4	11.1

156

TASK	MEAN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS									% NOT EXP IN 1ST YR	% EXP 3 MOS OR LES
				NONE	0	Y+	3Y	Y	6M	3M	M	W		
31	3.00	1.02	7	27	1	2	1	3	0	0	0	0	57.1	0.0
32	4.08	1.19	15	19	1	2	1	6	1	2	2	0	26.7	26.7
33	5.50	1.19	18	15	1	2	0	4	2	6	2	1	16.7	50.0
34	3.00	1.23	13	20	2	3	3	2	0	2	0	1	61.5	23.1
35	3.50	1.17	10	25	0	2	3	2	1	0	2	0	50.0	20.0
36	3.00	3.06	5	30	1	1	1	0	0	0	0	2	60.0	40.0
37	2.25	0.63	5	30	1	2	2	0	0	0	0	0	100.0	0.0
38	2.75	1.31	9	26	2	2	2	1	0	2	0	0	66.7	22.2
39	4.00	1.75	8	26	1	2	0	2	1	0	2	0	37.5	25.0
40	4.00	1.13	22	10	2	3	3	6	6	2	0	0	36.4	9.1
41	4.33	1.85	15	19	1	3	1	3	2	2	1	2	33.3	33.3
42	3.33	0.94	11	24	1	2	3	3	0	0	2	0	54.5	18.2
43	1.50	0.83	18	16	9	4	3	1	0	1	0	0	88.9	5.6
44	3.33	0.83	23	10	1	3	9	5	0	1	3	1	56.5	21.7
45	2.75	1.73	16	17	5	2	4	0	4	1	0	0	68.8	6.3
46	2.25	1.63	17	16	7	2	2	2	1	1	0	2	64.7	17.6
47	2.00	0.69	7	28	2	3	1	1	0	0	0	0	85.7	0.0
48	2.83	0.58	12	21	1	3	6	1	0	0	1	0	83.3	8.3
49	2.14	0.92	17	16	4	7	2	3	0	0	1	0	76.5	5.9
50	3.50	1.50	4	31	1	0	1	1	0	0	1	0	50.0	25.0
51	3.00	1.03	12	23	2	3	2	5	0	0	0	0	58.3	0.0
52	4.27	1.13	29	5	0	2	4	11	4	2	5	1	20.7	27.6
53	3.33	1.67	17	17	3	3	3	3	1	0	3	1	52.9	23.5
54	4.42	1.32	21	13	1	2	2	6	2	4	2	2	23.8	38.1
55	2.50	0.75	8	26	0	4	2	0	1	0	1	0	75.0	12.5
56	3.60	0.85	17	17	1	2	5	5	2	0	1	1	47.1	11.8
57	4.00	0.88	20	14	1	3	2	8	4	0	0	2	30.0	10.0
58	1.88	0.77	13	21	5	4	4	0	0	0	0	0	100.0	0.0
59	3.83	1.92	12	22	1	3	1	3	0	2	1	1	41.7	33.3
60	3.75	1.67	15	18	1	3	3	2	2	1	1	2	46.7	26.7
61	2.88	1.28	11	24	0	4	4	0	1	1	1	0	72.7	18.2
62	3.00	2.04	14	19	3	3	2	1	1	2	1	1	57.1	28.6
63	4.17	2.44	14	19	0	4	1	3	0	1	2	3	35.7	42.9
64	5.70	1.50	16	17	1	1	2	2	1	5	2	2	25.0	56.3
65	5.75	1.73	13	20	0	1	1	3	1	2	2	3	15.4	53.8

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS									% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	0	Y+	3Y	Y	6M	3M	M	W		
66	5.50	1.42	8	27	0	0	0	0	4	1	0	3	0.0	50.0
67	6.43	1.15	27	7	0	0	0	2	5	7	4	9	0.0	74.1
68	7.36	1.23	28	5	0	0	0	1	6	1	7	13	0.0	75.0
69	7.88	0.31	25	9	0	0	0	0	3	0	2	20	0.0	88.0
70	3.17	1.50	8	27	1	1	3	0	1	2	0	0	62.5	25.0
71	5.50	1.83	14	21	1	0	3	2	1	2	3	2	28.6	50.0
72	5.83	1.70	24	10	0	0	3	5	3	3	4	6	12.5	54.2
73	2.75	0.94	3	32	1	0	2	0	0	0	0	0	100.0	0.0
74	2.75	1.19	15	20	3	4	2	4	1	1	0	0	60.0	6.7
75	2.33	1.05	13	22	4	3	3	2	1	0	0	0	76.9	0.0
76	2.75	1.25	11	23	3	2	2	3	0	1	0	0	63.6	9.1
77	2.25	0.81	10	25	2	4	2	2	0	0	0	0	80.0	0.0
78	3.81	0.66	21	14	0	0	8	8	3	2	0	0	38.1	9.5
79	2.00	0.33	8	27	1	6	1	0	0	0	0	0	100.0	0.0
80	2.13	0.85	11	24	3	4	2	1	1	0	0	0	81.8	0.0
81	2.30	0.47	8	27	0	5	3	0	0	0	0	0	100.0	0.0
82	2.67	0.69	7	28	1	2	3	0	0	1	0	0	85.7	14.3
83	2.25	0.77	7	28	2	2	3	0	0	0	0	0	100.0	0.0
84	6.75	1.70	12	22	0	0	0	5	0	0	4	3	0.0	58.3
85	2.75	0.44	3	32	0	1	2	0	0	0	0	0	100.0	0.0
86	2.67	0.94	11	24	2	3	3	2	0	0	0	1	72.7	9.1
87	3.00	0.88	6	29	0	2	2	1	1	0	0	0	66.7	0.0
88	2.38	0.59	7	27	0	4	2	1	0	0	0	0	85.7	0.0
89	2.28	0.76	20	15	3	9	4	3	0	1	0	0	80.0	5.0
90	3.63	1.41	13	21	3	2	1	4	1	1	0	1	46.2	15.4
91	6.50	1.38	24	10	0	2	1	3	1	5	8	4	12.5	70.8
92	7.00	1.86	13	21	2	0	0	2	0	1	3	5	15.4	69.2
93	6.75	1.89	19	15	1	0	0	6	2	0	2	8	5.3	52.6
94	3.00	2.44	11	24	2	3	1	2	0	0	2	1	54.5	27.3
95	4.00	0.33	8	27	0	0	1	6	1	0	0	0	12.5	0.0
96	4.13	0.47	14	21	2	0	0	8	4	0	0	0	14.3	0.0
97	6.75	1.62	23	11	2	0	0	4	2	2	6	7	8.7	65.2
98	1.33	1.17	5	30	3	0	1	0	1	0	0	0	80.0	0.0
99	4.33	2.06	13	21	1	0	3	3	1	0	2	3	30.8	38.5
100	4.38	1.34	17	17	2	0	3	4	2	4	0	2	29.4	35.3

ESG

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS								% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	0	Y+	3Y	Y	6M	3M	M	W		
101	7.00	1.53	25	9	0	0	0	5	4	1	5	10	0.0	64.0
102	7.50	0.75	20	15	0	0	0	0	4	1	5	10	0.0	80.0
103	3.50	1.50	4	31	1	0	1	1	1	0	0	0	50.0	0.0
104	4.00	0.42	5	30	1	0	0	3	0	1	0	0	20.0	20.0
105	2.00	1.42	7	27	3	1	0	3	0	0	0	0	57.1	0.0
106	3.50	1.00	8	24	1	0	3	1	3	0	0	0	50.0	0.0
107	3.00	1.33	8	25	3	0	2	3	0	0	0	0	62.5	0.0
108	1.50	1.25	8	25	4	0	2	0	1	1	0	0	75.0	12.5
109	4.33	1.48	5	30	0	0	0	3	0	0	2	0	0.0	40.0
110	5.50	1.75	10	25	0	1	2	0	2	2	2	1	30.0	50.0
111	3.00	1.13	7	28	2	0	3	2	0	0	0	0	71.4	0.0
112	1.00	0.25	2	33	2	0	0	0	0	0	0	0	100.0	0.0
113	0.0	0.0	0	35	0	0	0	0	0	0	0	0	0.0	0.0
114	3.33	1.42	11	22	3	0	3	3	1	0	1	0	54.5	9.1
115	3.75	1.17	9	25	1	0	3	2	1	1	0	1	44.4	22.2
116	5.00	2.00	6	29	1	0	1	0	2	0	1	1	33.3	33.3
117	6.17	1.25	34	0	0	0	0	5	8	6	7	8	0.0	61.8
118	7.74	0.77	29	5	0	0	0	2	0	5	3	19	0.0	93.1
119	6.50	1.51	34	0	0	0	0	7	7	3	6	11	0.0	58.8
120	4.29	1.29	34	1	0	2	4	14	1	6	4	3	17.6	38.2
121	5.70	1.22	32	1	0	0	2	4	9	5	6	6	6.3	53.1
122	4.50	1.50	26	9	0	3	4	6	3	4	4	2	26.9	38.5
123	4.45	0.95	31	4	0	0	6	10	7	3	3	2	19.4	25.8
124	4.25	1.08	32	3	0	1	6	12	4	4	2	3	21.9	28.1
125	7.20	0.85	34	0	0	0	0	2	3	5	10	14	0.0	85.3
126	4.94	1.47	31	3	0	0	3	9	8	0	7	4	9.7	35.5
127	6.54	1.10	33	1	0	0	0	4	8	4	12	5	0.0	63.6
128	4.39	0.94	30	5	0	1	6	9	7	3	2	2	23.3	23.3
129	4.13	1.34	19	16	0	1	6	4	2	4	0	2	36.8	31.4
130	5.67	1.39	30	5	0	0	3	7	4	6		4	10.0	53.3
131	5.79	1.47	32	3	0	0	2	9	3	7	5	6	6.3	56.3
132	6.68	1.10	34	0	0	0	2	5	2	6	11	8	5.9	73.5
133	5.70	1.50	32	3	0	0	2	6	7	5	4	8	6.3	53.1
134	2.00	2.83	7	28	3	1	1	0	0	0	1	1	71.4	28.6
135	3.33	1.33	13	22	3	1	3	3	0	0	2	1	53.8	23.1

ERIC

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS								% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	0	Y+	3Y	Y	6M	3M	M	W	
136	6.38	1.28	35	0	0	0	2	6	6	4	12	5	5.7	60.0
137	4.60	1.42	25	10	2	0	4	6	5	2	5	1	24.0	32.0
138	4.60	1.50	33	2	0	1	5	10	5	2	8	2	18.2	36.4
139	4.31	1.37	33	2	0	1	5	13	3	3	6	2	18.2	33.3
140	6.79	1.40	34	1	0	0	1	4	7	3	7	12	2.9	64.7
141	5.83	1.29	34	1	0	0	2	6	8	3	10	5	5.9	52.9
142	4.64	1.17	30	5	2	0	1	11	7	2	3	4	10.0	30.0
143	6.55	1.31	35	0	0	0	0	7	8	2	11	7	0.0	57.1
144	6.00	1.70	34	1	0	0	1	10	5	2	6	10	2.9	52.9
145	7.42	1.01	35	0	0	0	0	2	4	6	6	17	0.0	82.9
146	6.33	1.67	33	2	0	0	1	8	5	3	5	11	3.0	57.6
147	6.88	1.30	34	1	0	0	1	2	8	3	8	12	2.9	67.6
148	4.75	1.74	33	2	0	1	6	9	2	3	6	6	21.2	45.5
149	4.75	1.73	31	4	0	1	5	9	2	3	5	6	19.4	45.2
150	7.53	0.78	35	0	0	0	0	2	2	5	8	18	0.0	88.6
151	5.07	1.35	34	1	0	0	3	10	7	4	6	4	8.8	41.2
152	5.00	1.65	32	3	0	0	5	9	4	1	8	5	15.6	43.8
153	4.21	1.54	22	13	1	3	2	7	1	3	1	4	27.3	36.4
154	4.10	1.75	16	19	1	2	2	5	1	1	2	2	31.3	31.3
155	6.78	1.21	35	0	0	0	0	4	6	5	9	11	0.0	71.4
156	5.50	1.45	34	1	0	0	2	11	4	5	7	5	5.9	50.0
157	4.36	1.45	31	4	0	2	4	11	5	1	4	4	19.4	29.0
158	4.45	1.34	31	2	0	0	6	10	3	5	4	3	19.4	38.7
159	4.50	1.19	28	7	0	1	5	8	6	2	4	2	21.4	28.6
160	7.00	1.19	35	0	0	0	0	4	5	4	9	13	0.0	74.3
161	2.50	1.67	8	27	3	1	1	1	0	1	0	1	62.5	25.0
162	6.13	1.49	35	0	0	0	2	9	4	4	10	6	5.7	57.1
163	6.56	1.53	35	0	0	0	1	8	3	5	9	5	2.9	65.7
164	3.57	0.82	23	12	4	0	7	7	1	1	2	1	47.8	17.4
165	3.75	1.52	10	25	3	0	1	4	0	0	1	1	40.0	20.0
166	5.63	1.33	33	2	0	0	3	4	9	4	6	7	9.1	51.5
167	4.08	0.83	28	7	1	2	4	12	3	5	1	0	25.0	21.4
168	5.31	1.40	35	0	0	0	1	10	8	2	9	5	2.9	45.7
169	6.94	0.99	35	0	0	0	0	3	3	8	8	13	0.0	82.9
170	6.94	1.10	35	0	0	0	0	3	5	6	8	13	0.0	77.1

100

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS								% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	0	Y+	3Y	Y	6M	3M	M	W		
171	4.50	1.58	32	3	0	0	4	12	5	1	4	6	12.5	34.4
172	3.92	0.56	27	8	1	0	7	13	2	1	2	1	29.6	14.8
173	5.00	1.39	33	2	0	0	2	12	5	4	6	4	6.1	42.4
174	3.29	0.85	19	16	3	1	7	4	2	1	1	0	57.9	10.5
175	3.96	0.96	33	2	2	1	8	12	3	3	1	3	33.3	21.2
176	4.50	1.40	28	7	1	0	2	11	0	6	6	2	10.7	50.0
177	4.21	1.31	32	3	0	3	8	7	5	4	2	3	34.4	28.1
178	4.21	0.82	31	4	0	2	5	12	6	1	2	3	22.6	19.4
179	5.60	1.14	35	0	0	0	2	4	11	5	8	5	5.7	51.4
180	3.41	0.73	26	9	1	2	11	7	2	1	1	1	53.8	11.5
181	5.50	1.30	34	1	0	0	0	14	3	7	7	3	0.0	50.0
182	6.00	1.41	34	0	0	0	0	11	4	4	11	4	0.0	55.9
183	6.00	1.53	34	1	0	0	1	12	3	2	11	5	2.9	52.9
184	5.83	1.47	34	1	0	0	3	9	4	3	12	3	8.8	52.9
185	5.22	1.42	33	2	0	1	2	7	9	1	8	5	9.1	42.4
186	5.10	1.45	34	1	0	0	2	12	5	2	10	3	5.9	44.1
187	5.29	1.43	35	0	0	0	2	10	7	3	8	5	5.7	45.7
188	6.55	1.13	35	0	0	0	0	3	10	4	11	7	0.0	62.9
189	6.17	1.43	34	1	0	0	2	8	5	3	11	5	5.9	55.9
190	6.80	1.27	34	1	0	0	0	3	9	2	10	10	0.0	64.7
191	4.41	1.66	32	3	0	1	5	11	2	2	6	5	18.8	40.6
192	3.75	1.69	7	28	2	1	0	2	1	0	1	0	42.9	14.3
193	3.00	1.38	7	28	2	1	1	2	1	0	0	0	57.1	0.0
194	4.44	1.22	25	10	0	0	4	9	3	4	2	3	16.0	36.0
195	5.25	1.36	30	5	0	0	3	9	4	5	7	2	10.0	46.7
196	5.33	1.38	32	3	1	0	3	7	6	5	6	4	12.5	46.9
197	5.06	1.31	32	3	0	1	3	7	9	3	5	4	12.5	37.5
198	4.40	1.75	29	6	0	2	8	5	0	6	5	3	34.5	48.3
199	4.32	1.10	32	3	0	2	5	11	4	7	1	2	21.9	31.3
200	4.50	1.34	28	7	0	0	6	8	3	5	3	3	21.4	39.3
201	3.80	1.47	17	17	1	4	2	5	1	1	0	3	41.2	23.5
202	3.29	0.65	27	8	0	4	12	8	1	0	0	2	59.3	7.4
203	4.92	1.49	29	6	1	1	4	6	6	3	4	4	20.7	37.9
204	4.17	0.92	30	5	1	0	6	12	4	5	0	2	23.3	23.3
205	3.46	0.65	27	8	0	2	12	9	1	1	0	2	51.9	11.1

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS								% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	0	Y+	3Y	Y	6M	3M	M	W	
206	4.06	1.00	28	7	0	1	8	9	4	2	2	2	32.1	21.4
207	4.50	1.12	30	5	0	0	3	12	2	9	3	1	10.0	43.3
208	4.92	1.12	31	4	0	0	3	10	5	6	4	2	9.7	38.7
209	5.07	1.24	34	1	0	0	1	12	7	5	5	4	2.9	41.2
210	5.21	1.14	32	3	0	1	3	7	7	7	4	3	12.5	43.8
211	5.50	1.21	30	5	0	1	1	8	5	7	5	3	6.7	50.0
212	6.90	1.15	34	1	0	0	1	1	7	4	10	11	2.9	73.5
213	6.72	1.11	34	1	0	0	0	2	7	6	9	10	0.0	73.5
214	3.94	1.40	33	2	1	1	11	8	3	2	4	3	39.4	27.3
215	4.50	1.61	34	1	0	1	6	10	3	4	4	6	20.6	41.2
216	5.50	1.53	34	1	0	1	4	8	4	7	3	7	14.7	50.0
217	7.11	0.96	33	2	0	0	0	2	4	5	9	13	0.0	81.8
218	5.50	1.44	34	1	0	1	2	9	5	6	5	6	8.8	50.0
219	6.20	1.74	33	2	0	0	2	9	2	5	5	10	6.1	60.6
220	5.80	1.69	33	2	0	1	1	11	2	5	5	8	6.1	54.5
221	4.67	1.34	33	2	0	1	6	9	3	7	2	5	21.2	42.4
222	6.10	1.68	32	3	0	0	2	8	3	5	5	9	6.3	59.4
223	5.38	1.61	33	1	0	1	3	9	4	5	4	7	12.1	48.5
224	6.17	1.73	34	1	0	0	1	1	1	6	5	10	2.9	61.8
225	6.25	1.46	34	1	0	1	2	6	5	4	9	7	8.8	58.8
226	4.70	1.03	34	1	1	1	5	8	10	2	4	3	20.6	26.5
227	4.07	0.86	30	5	1	1	5	14	2	5	0	2	23.3	23.3
228	6.10	1.52	32	3	0	0	3	7	3	5	8	6	9.4	59.4
229	6.20	1.62	33	2	0	0	1	10	2	5	7	8	3.0	60.6
230	6.50	1.30	34	1	0	0	0	7	6	4	10	7	0.0	61.8
231	5.33	1.55	29	6	1	0	4	7	3	3	9	2	17.2	48.3
232	4.45	1.23	33	2	1	0	6	10	3	8	3	2	21.2	39.4
233	5.33	1.43	33	2	0	0	4	10	3	6	6	4	12.1	48.5
234	5.07	1.46	34	1	0	1	3	9	7	3	6	5	11.8	41.2
235	4.32	1.20	32	2	0	1	6	11	3	6	2	3	21.9	34.4
236	7.40	0.71	34	1	0	0	0	1	4	3	10	16	0.0	85.3
237	6.70	1.14	34	1	0	0	0	2	6	8	5	13	0.0	76.5
238	7.65	0.68	34	1	0	0	0	0	5	2	7	20	0.0	85.3
239	6.94	1.18	34	1	0	0	0	2	7	4	9	12	0.0	73.5
240	6.88	1.10	34	1	0	0	0	1	7	6	8	12	0.0	76.5

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS								% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	O	Y+	3Y	Y	6M	3M	M		
241	6.00	1.51	34	1	0	0	5	5	5	4	9	6	14.7	55.9
242	7.50	1.29	34	1	0	0	0	3	6	3	5	17	0.0	73.5
243	5.42	1.70	31	4	2	0	2	6	6	3	4	8	12.9	48.4
244	6.67	1.47	34	1	0	0	3	3	7	3	6	12	8.8	61.8
245	4.25	1.20	24	11	0	1	5	8	2	5	1	2	25.0	33.3
246	3.77	0.66	24	11	1	2	6	11	2	1	0	1	37.5	8.3
247	5.00	1.21	34	1	0	0	3	11	6	6	4	4	8.8	41.2
248	3.90	1.13	30	5	0	4	7	10	2	4	1	2	36.7	23.3
249	6.75	1.61	34	1	0	0	3	5	3	5	4	14	8.8	67.6
250	4.05	0.61	21	13	1	1	3	10	3	0	1	2	23.8	14.3
251	5.13	1.40	30	4	0	0	5	5	8	3	5	4	16.7	40.0
252	4.00	1.56	9	24	0	1	2	3	0	1	1	1	33.3	33.3
253	4.40	1.65	32	2	0	0	7	10	0	5	5	5	21.9	46.9
254	7.00	1.35	32	1	0	0	0	3	8	1	8	12	0.0	65.6
255	5.60	1.54	33	1	0	0	4	11	1	5	8	4	12.1	51.5
256	7.67	0.77	33	1	0	0	0	0	0	8	5	20	0.0	100.0
257	6.42	1.40	33	1	0	0	1	5	5	6	5	11	3.0	66.7
258	6.58	1.68	33	1	0	0	2	7	3	4	6	11	6.1	63.6
259	5.83	1.49	30	4	0	0	3	5	5	6	4	7	10.0	56.7
260	3.83	0.89	22	12	3	2	3	9	1	2	1	1	36.4	18.2
261	4.67	1.49	31	3	0	0	5	10	3	4	5	4	16.1	41.9
262	5.36	1.42	32	2	0	0	4	6	7	4	6	5	12.5	46.9
263	6.69	1.23	33	1	0	0	0	4	6	5	8	10	0.0	69.7
264	3.38	1.44	15	19	4	0	1	4	1	1	0	1	53.3	13.3
265	3.50	2.75	8	25	2	1	1	1	0	0	2	1	50.0	37.5
266	3.25	2.31	13	21	3	2	2	2	0	1	1	2	53.8	30.8
267	3.25	1.81	13	21	3	2	2	2	1	0	2	1	53.8	23.1
268	6.75	1.17	31	2	0	0	0	3	5	6	6	11	0.0	74.2
269	4.00	2.69	7	27	2	1	0	1	0	1	1	1	42.9	42.9
270	4.45	1.58	33	1	0	1	6	10	2	4	6	4	21.2	42.4
271	4.46	1.34	33	1	0	0	5	12	3	5	3	5	15.2	39.4
272	2.00	1.16	9	26	4	1	2	1	0	1	0	0	77.8	11.1
273	4.50	1.60	30	3	1	0	5	9	3	2	7	3	20.0	40.0
274	4.38	1.36	29	5	0	0	5	11	3	3	4	3	17.2	34.5
275	7.74	0.50	32	1	0	0	0	0	1	2	8	21	0.0	96.9

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS									% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	0	Y+	3Y	Y	6M	3M	M	W		
276	7.64	0.58	31	2	0	0	0	0	1	3	9	18	0.0	96.8
277	7.45	0.65	31	2	0	0	0	0	1	5	10	15	0.0	96.8
278	7.00	0.48	29	4	0	0	0	1	1	5	15	7	0.0	93.1
279	6.91	0.80	31	2	0	0	0	2	2	7	11	9	0.0	87.1
280	4.33	2.69	15	18	4	0	1	3	2	0	4	1	33.3	33.3
281	7.50	0.85	32	1	0	0	0	1	3	5	7	16	0.0	87.5
282	7.19	0.93	31	1	0	0	0	3	2	5	8	13	0.0	83.9
283	6.17	1.47	30	3	1	0	3	4	1	3	8	6	13.3	56.7
284	7.25	0.96	32	1	0	0	0	1	3	4	8	14	0.0	81.3
285	7.36	0.93	32	1	0	0	0	1	4	5	7	15	0.0	84.4
286	6.50	1.33	30	3	0	0	0	7	3	5	9	6	0.0	66.7
287	5.88	1.16	32	1	0	0	1	5	7	8	5	6	3.1	59.4
288	4.67	1.53	23	8	1	1	2	7	3	2	4	3	17.4	39.1
289	7.61	0.65	32	1	1	0	0	0	5	0	8	18	3.1	81.3
290	7.14	0.79	32	1	0	0	1	2	2	4	11	12	3.1	84.4
291	4.25	1.10	29	3	1	1	2	14	2	4	2	3	13.8	31.0
292	4.30	0.95	28	4	1	0	5	10	5	2	3	2	21.4	25.0
293	5.25	1.53	31	1	0	0	3	8	6	3	5	6	9.7	45.2
294	7.00	1.10	29	4	0	0	1	2	4	3	9	10	3.4	75.9
295	7.06	1.08	30	3	0	0	1	1	5	3	9	11	3.3	76.7
296	3.88	1.33	28	6	3	2	6	8	2	2	3	2	39.3	25.0
297	4.81	1.04	33	1	0	1	2	11	8	5	3	3	9.1	33.3
298	4.29	1.02	32	2	0	1	4	14	4	4	3	2	15.6	28.1
299	5.00	1.46	32	1	0	0	5	8	6	3	7	3	15.6	40.6
300	3.83	0.65	22	12	1	3	3	12	2	0	1	0	31.8	4.5
301	7.11	1.03	33	1	0	0	0	4	3	4	9	13	0.0	78.8
302	5.00	1.08	29	5	0	0	2	9	7	5	3	3	6.9	37.9
303	5.00	1.08	30	4	0	0	1	11	6	6	3	3	3.3	40.0
304	5.17	1.42	24	10	2	0	2	4	6	3	3	4	16.7	41.7
305	6.83	1.04	32	1	0	0	1	3	2	8	6	12	3.1	81.3
306	6.94	1.05	33	1	0	0	1	3	3	6	8	12	3.0	78.8
307	6.57	1.44	31	3	2	0	1	4	3	5	7	9	9.7	67.7
308	6.36	1.07	33	1	0	0	2	3	2	11	4	11	6.1	78.8
309	6.80	1.10	33	1	0	0	1	3	3	8	5	13	3.0	78.8
310	2.25	1.28	11	23	4	2	2	1	0	1	0	1	72.7	18.2

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS									% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	0	Y+	3Y	Y	6M	3M	M	W		
311	5.43	1.29	33	1	0	0	1	9	7	5	7	4	3.0	48.5
312	4.50	1.61	26	7	2	1	3	7	4	1	5	3	23.1	34.6
313	4.70	1.50	28	6	3	1	3	6	5	3	5	2	25.0	35.7
314	3.83	1.08	14	20	2	2	1	6	1	1	0	1	35.7	14.3
315	5.25	1.13	33	1	1	0	2	6	10	5	6	3	9.1	42.4
316	6.00	1.45	33	1	0	0	1	7	5	7	5	8	3.0	60.6
317	5.00	1.25	20	14	1	0	1	6	2	5	3	2	10.0	50.0
318	5.86	2.10	21	13	5	0	1	2	1	4	6	2	28.6	57.1
319	2.50	1.45	12	22	5	1	2	2	0	1	0	1	66.7	16.7
320	5.07	1.35	32	2	0	0	3	9	7	4	4	5	9.4	40.6
321	5.00	1.43	33	1	0	0	2	13	3	5	5	5	6.1	45.5
322	4.32	1.07	33	1	1	0	4	14	5	2	5	2	15.2	27.3
323	4.25	1.07	31	3	3	0	5	10	5	3	3	2	25.8	25.8
324	5.71	1.48	33	1	0	0	1	10	4	7	4	7	3.0	54.5
325	4.45	1.27	31	3	2	0	4	10	3	6	3	3	19.4	38.7
326	5.22	1.48	33	1	0	0	2	8	9	2	5	7	6.1	42.4
327	6.20	1.43	33	1	0	0	1	5	7	5	5	10	3.0	60.6
328	5.67	1.43	33	1	0	0	1	5	10	3	5	9	3.0	51.5
329	6.20	1.40	33	1	0	0	0	8	5	5	8	7	0.0	60.6
330	5.38	1.36	27	7	1	0	1	8	4	5	4	4	7.4	48.1
331	4.38	1.10	28	6	0	1	6	8	5	5	1	2	25.0	28.6
332	7.00	1.01	32	2	0	0	0	2	5	4	10	11	0.0	78.1
333	6.10	1.11	28	6	0	0	2	3	6	5	9	3	7.1	60.7
334	4.23	0.87	26	8	1	1	3	11	4	4	1	1	19.2	23.1
335	3.40	0.83	13	21	1	1	5	3	0	2	1	0	53.8	23.1
336	5.00	1.45	19	15	0	0	3	5	3	2	5	1	15.8	42.1
337	6.86	1.20	32	2	0	0	0	3	7	2	11	9	0.0	68.8
338	4.32	1.11	28	5	0	1	4	11	3	5	3	1	17.9	32.1
339	7.61	0.61	32	2	1	0	0	0	0	4	9	18	3.1	96.9
340	7.59	0.66	31	3	0	0	0	1	1	4	8	17	0.0	93.5
341	6.61	1.08	32	2	0	0	1	2	6	6	9	8	3.1	71.9
342	5.00	1.03	27	7	0	0	2	8	7	5	4	1	7.4	37.0
343	4.90	1.21	28	6	0	0	4	8	5	5	4	2	14.3	39.3
344	4.90	1.15	28	5	0	0	2	10	5	5	4	2	7.1	39.3
345	7.00	1.17	32	2	0	0	0	3	5	4	8	12	0.0	75.0

TASK	MDN	Q	N	DISTRIBUTION OF SUPERVISOR EXPECTATIONS									% NOT EXP IN 1ST YR	% EXP 3 MOS OR LESS
				NONE	0	Y+	3Y	Y	6M	3M	M	W		
346	4.38	1.09	29	5	0	1	3	12	3	6	3	1	13.8	34.5
347	7.06	0.97	32	2	0	0	0	1	5	5	9	12	0.0	81.3
348	3.64	0.81	24	10	1	2	8	7	1	2	2	1	45.8	20.8
349	3.72	0.73	24	10	1	2	7	9	1	4	0	0	41.7	16.7
350	3.94	0.86	21	13	1	1	5	8	2	3	1	0	33.3	19.0
351	3.63	0.75	24	10	1	2	8	8	0	2	3	0	45.8	20.8
352	3.72	0.73	24	10	1	2	7	9	1	3	2	0	41.7	20.8
353	3.36	0.76	20	14	1	3	7	6	0	3	0	0	55.0	15.0
354	3.79	0.78	18	16	1	2	4	7	1	1	2	0	38.9	16.7
355	3.56	0.77	23	11	2	2	7	8	0	2	2	0	47.8	17.4
356	3.75	0.79	24	10	1	2	7	8	0	4	1	1	41.7	25.0
357	4.25	1.12	25	8	1	1	6	6	5	2	4	0	32.0	24.0
358	3.63	0.75	24	10	1	2	8	8	1	3	0	1	45.8	16.7
359	3.56	0.72	23	11	1	2	8	8	0	1	2	1	47.8	17.4
360	3.56	0.72	23	11	1	2	8	8	0	2	1	1	47.8	17.4
361	3.56	0.72	23	11	1	2	8	8	1	2	0	1	47.8	13.0
362	4.38	0.85	24	7	0	1	4	8	6	2	3	0	20.8	20.8
363	5.25	1.41	31	2	0	0	3	11	2	6	5	4	9.7	48.4
364	6.85	0.99	31	2	0	0	1	3	3	5	10	9	3.2	77.4
365	6.91	0.80	31	2	0	0	0	3	1	7	11	9	0.0	87.1
366	6.50	1.17	30	2	0	0	0	6	3	6	9	6	0.0	70.0
367	5.83	1.31	30	3	0	0	1	8	4	6	8	3	3.3	56.7
368	5.50	1.38	30	3	0	0	2	11	2	6	6	3	6.7	50.0
369	5.00	1.43	22	11	0	0	2	8	2	3	5	2	9.1	45.5
370	4.00	1.50	8	25	1	1	1	2	1	0	1	1	37.5	25.0
371	7.82	0.37	30	3	0	0	0	0	1	1	6	22	0.0	96.7
372	7.85	0.33	17	17	1	0	0	0	1	1	1	13	5.9	88.2
373	7.74	0.48	29	4	0	0	0	0	1	1	8	19	0.0	96.6
374	7.86	0.32	23	10	0	0	0	0	1	1	3	18	0.0	95.7
375	6.20	1.62	27	8	0	0	4	3	3	5	4	8	14.8	63.0
376	6.33	1.29	25	10	1	0	3	1	5	3	7	5	16.0	60.0
377	7.77	0.44	22	12	0	0	0	0	0	1	6	15	0.0	100.0
378	7.40	0.80	19	16	0	0	1	0	2	2	5	9	5.3	84.2
379	7.40	0.60	13	22	1	0	1	0	0	0	5	6	15.4	84.6
380	7.29	1.01	29	3	0	0	0	2	4	3	7	13	0.0	79.3
TOTALS:				3966	334	360	946	1981	1116	1090	1503	1718		

100

Table C-6

Learning Location (Q12 and Q13)[a]

Question 12: Learning Location (Workers)

From your total experience as an Automotive Mechanic (with present and previous employers), judge where each job activit should be learned. That is, where should an Automotive Mechanic make the main effort to learn what needs to be known about each activity?

Categories of the Response Scale:

a. Prior to enrollment in a formal job training program (P).
b. In a formal training program or school before regular employment in the job (T).
c. On site (such as by job experience after employment or on-the-job training) (S).
d. Through prior employment experience in a related or lower entry occupation (E).
e. Other (comments to be written in) (O).
f. There is nothing that new Automotive Mechanics would need to learn about the activity (such as when it is not part of the job or there is nothing of any real substance to learn) (N).

Question 13: Learning Location (Supervisors)

From your total experience in employing and supervising Automotive Mechanics, judge where each job activity should be learned.

Categories of the Response Scale: Identical to those of Question 12.

Each of the 26 columns of Table C-6 is identified below.

Column 87: Number of workers suggesting that the task essentially should be learned prior to formal training (P).

Column 88: Number of workers suggesting that the task should be learned mainly in formal training before employment (T).

---

[a]Question 12 was answered by workers in Group 2 for all tasks in the inventory. Question 13 was answered by supervisors only for those tasks checked on Q2.

Table C-6-continued

Column 89: Number of workers suggesting that the task should be learned mainly on site, after employment (S).

Column 90: Number of workers suggesting that the task should be learned mainly through experience in other occupations (E).

Column 91: Number of workers suggesting learning locations other than those listed (O).

Note: Asterisks (*) appear next to frequency numbers in Columns 87-91 when that category receives 20% or more of the combined responses of P, T, S, E, and O (but not counting "nothing to learn" responses).

Column 92: Number of workers suggesting that no particular learning would be needed for the task.

Column 93: Number of workers indicating that the task is not considered as part of their job (Question 6). This entry is repeated here from Table C-3 (Column 36) to permit comparison with Column 92 (*). Obviously, many workers suggested a learning location on Question 12, even though these same workers had indicated on Question 6 that the task was not part of their job. No attempt was made in this study to restrict the counting and summarizing of Question 12 responses to only those tasks on which each worker had indicated that it was at least of some minor significance to the job (Question 6).

Columns 94 through 97: Percent of workers suggesting that the main learning location be prior to training (P), training before employment (T), or the job situation itself (S). Since both categories S and E represent job experience of one sort or another, Column 97 reports the combined percent of workers using either of these responses for a task.

Column 98: Most common response (mode) given by workers, not considering the "nothing to learn" (N) category. Occasionally more than one category tied for most common use. The table displays as many as two modes for a task. If there were more than two modes, as may readily occur when very few workers suggest a learning location, the table displays the symbol "MM", an abbreviation for "multiple modes."

Column 99:	Percent of workers giving the modal response; with the percentage based on the combined number of responses using categories P, T, S, E, and O (but not including N responses).
Columns 100 through 105:	Same as Columns 87 through 92 but for supervisors' ratings. Column 105 (N) represents a true rating of no training need for a relevant task, since supervisors only answered Question 13 for tasks they had checked on Question 2. Though the N category may occasionally represent the modal response, no asterisk was printed to indicate this.
Column 106:	Similar to Column 93, but using negative responses to Question 2 by the 39 supervisors in Group 2.
Columns 107 through 112:	Same as Columns 94 through 99, but for supervisors' ratings.

TASK INVENTORY DATA SUMMARY
AUTO MECHANICS -- COMPOSITE

TABLE 6: LEARNING LOCATION
(Q12 & 13)

	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
TASK	P	T	S	E	O	N	Q6 NO	P	T	S	S+E	NO	%	P	T	S	E	O	N	Q2 NO	P	T	S	S+E	NO	%
1	4	13*	8*	8*	1	25	52	11.8	38.2	23.5	47.1	T	38.2	0	3*	1	2*	0	0	33	0.0	50.0	16.7	50.0	T	50.0
2	6	19*	7*	3	0	24	55	17.1	54.3	20.0	23.6	T	54.3	0	1*	1*	1*	0	0	36	0.0	33.3	33.3	66.7	MM	0.0
3	2	28*	15*	5	0	9	26	4.0	56.0	30.0	40.0	T	56.0	0	8*	14*	2	0	1	13	0.0	33.3	58.3	66.7	S	58.3
4	3	17*	15*	8	0	17	39	7.0	39.5	34.9	53.5	T	39.5	0	6*	8*	2	0	0	22	0.0	37.5	50.0	62.5	S	50.0
5	4	10*	13*	6	1	25	58	11.8	29.4	38.2	55.9	S	38.2	0	0	1*	2*	0	0	36	0.0	0.0	33.3	100.0	E	66.7
6	1	7	26*	7	0	18	39	2.4	17.1	63.4	80.5	S	63.4	1	2	8*	3*	0	2	22	7.1	14.3	57.1	78.6	S	57.1
7	1	9*	24*	4	1	19	47	2.6	23.1	61.5	71.8	S	61.5	0	4*	3*	1	0	0	29	0.0	50.0	37.5	50.0	T	50.0
8	2	12*	19*	3	0	23	52	5.6	33.3	52.8	61.1	S	52.8	0	1*	2*	1*	0	0	35	0.0	25.0	50.0	75.0	S	50.0
9	1	8*	18*	8*	0	24	49	2.9	22.9	51.4	74.3	S	51.4	0	0	3*	1*	0	0	35	0.0	0.0	75.0	99.9	S	75.0
10	1	10*	20*	12*	0	16	34	2.3	23.3	46.5	74.4	S	46.5	0	2	5*	4*	0	0	28	0.0	18.2	45.5	81.8	S	45.5
11	1	14*	19*	8	1	16	42	2.3	32.6	44.2	62.8	S	44.2	0	3*	2*	2*	0	0	32	0.0	42.9	28.6	57.1	T	42.9
12	4	6	21*	6	1	20	51	10.5	15.8	55.3	71.1	S	55.3	0	0	4*	2*	0	0	33	0.0	0.0	66.7	100.0	S	66.7
13	3	4	23*	7	0	22	48	8.1	10.8	62.2	81.1	S	62.2	0	1	7*	0	0	0	31	0.0	12.5	87.5	87.5	S	87.5
14	3	21*	22*	5	0	7	12	5.9	41.2	43.1	52.9	S	43.1	0	9*	13*	3	1	0	13	0.0	34.6	50.0	61.5	S	50.0
15	2	6	25*	9*	0	18	22	4.8	14.3	59.5	81.0	S	59.5	1	5*	11*	1	0	8	12	5.6	27.8	61.1	66.7	S	61.1
16	2	11*	13*	6	2	24	55	5.9	32.4	38.2	55.9	S	38.2	0	1*	1*	2*	0	0	35	0.0	25.0	25.0	75.0	E	50.0
17	1	7*	21*	6	0	25	48	2.9	20.0	60.0	77.1	S	60.0	0	1	5*	3*	0	1	29	0.0	11.1	55.6	88.9	S	55.6
18	3	10*	24*	3	1	19	40	7.3	24.4	58.5	65.9	S	58.5	2	3*	7*	1	0	0	25	15.4	23.1	53.8	61.5	S	53.8
19	4	6	21*	5	1	21	45	10.8	16.2	56.8	70.3	S	56.8	1	2*	3*	2*	0	0	31	12.5	25.0	37.5	62.5	S	37.5
20	1	10*	16*	10*	1	20	45	2.6	26.3	42.1	68.4	S	42.1	0	0	2*	3*	0	0	34	0.0	0.0	40.0	99.9	E	60.0
21	4	16*	5	3	2	28	58	13.3	53.3	16.7	26.7	T	53.3	0	2*	0	2*	0	0	35	0.0	50.0	0.0	50.0	TE	50.0
22	5	6	19*	5	2	22	42	13.5	16.2	51.4	64.9	S	51.4	0	2*	2*	2*	0	0	33	0.0	33.3	33.3	66.7	MM	0.0
23	1	7*	16*	9*	2	23	46	2.9	20.0	45.7	71.4	S	45.7	0	2*	4*	2*	0	1	30	0.0	25.0	50.0	75.0	S	50.0
24	1	3	23*	6	1	23	46	2.9	8.8	67.6	85.3	S	67.6	0	1	8*	0	0	0	30	0.0	11.1	88.9	88.9	S	88.9
25	1	3	21*	7*	1	24	51	3.0	9.1	63.6	84.8	S	63.6	0	4*	3*	4*	0	0	28	0.0	36.4	27.3	63.6	TE	36.4
26	1	12*	14*	8*	1	22	50	2.8	33.3	38.9	61.1	S	38.9	0	5*	4*	1	0	0	29	0.0	50.0	40.0	50.0	T	50.0
27	2	10*	25*	4	0	17	34	4.9	24.4	61.0	70.7	S	61.0	0	6*	10*	2	0	0	21	0.0	33.3	55.6	66.7	S	55.6
28	1	15*	15*	3	2	22	49	2.8	41.7	41.7	50.0	TS	41.7	0	2*	3*	0	0	1	32	0.0	40.0	60.0	60.0	S	60.0
29	0	4	20*	9*	2	23	45	0.0	11.4	57.1	82.9	S	57.1	0	3*	6*	3*	0	1	26	0.0	25.0	50.0	75.0	S	50.0
30	2	6	21*	6	0	23	44	5.7	17.1	60.0	77.1	S	60.0	0	2*	6*	0	0	1	29	0.0	25.0	75.0	75.0	S	75.0

TASK	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
	P	T	S	E	O	N	Q6 NO	P	T	S	S+E	MO	%
31	4	14*	6*	5	0	28	58	13.8	48.3	20.7	37.9	T	48.3
32	2	15*	19*	5	0	16	40	4.9	36.6	46.3	58.5	S	46.3
33	2	7	24*	9*	0	16	32	4.8	16.7	57.1	78.6	S	57.1
34	2	3	23*	9*	0	19	40	5.4	8.1	62.2	86.5	S	62.2
35	1	4	21*	8*	1	23	43	2.9	11.4	60.0	82.9	S	60.0
36	1	5	18*	5	0	25	54	3.4	17.2	62.1	79.3	S	62.1
37	2	13*	14*	5	1	22	48	5.7	37.1	40.0	54.3	S	40.0
38	5	5	15*	7*	1	24	52	15.2	15.2	45.5	66.7	S	45.5
39	1	10*	19*	5	2	20	47	2.7	27.0	51.4	64.9	S	51.4
40	4	5	21*	9*	1	17	31	10.0	12.5	52.5	75.0	S	52.5
41	2	5	24*	7	1	18	43	5.1	12.8	61.5	79.5	S	61.5
42	1	6	27*	4	0	19	42	2.6	15.8	71.1	81.6	S	71.1
43	7*	10*	12*	4	0	23	47	21.2	30.3	36.4	48.5	S	36.4
44	0	15*	21*	5	0	17	19	0.0	36.6	51.2	63.4	S	51.2
45	1	5	18*	3	0	30	56	3.7	18.5	66.7	77.8	S	66.7
46	2	4	20*	7*	0	24	43	6.1	12.1	60.6	81.8	S	60.6
47	0	6*	16*	7*	0	28	54	0.0	20.7	55.2	79.3	S	55.2
48	0	13*	13*	11*	0	21	51	0.0	35.1	35.1	64.9	TS	35.1
49	0	10*	17*	10*	0	21	49	0.0	27.0	45.9	73.0	S	45.9
50	1	10*	8*	12*	0	26	57	3.2	32.3	25.8	64.5	E	38.7
51	1	14*	8*	11*	1	23	53	2.9	40.0	22.9	54.3	T	40.0
52	0	37*	16*	4	0	3	5	0.0	64.9	28.1	35.1	T	64.9
53	0	25*	18*	4	0	13	29	0.0	53.2	38.3	46.8	T	53.2
54	1	22*	22*	7	0	7	16	1.9	42.3	42.3	55.8	TS	42.3
55	2	8*	19*	4	1	23	50	5.9	23.5	55.9	67.6	S	55.9
56	0	16*	20*	9	1	13	34	0.0	34.8	43.5	63.0	S	43.5
57	2	13*	23*	9	0	12	28	4.3	27.7	48.9	68.1	S	48.9
58	2	9*	11*	10*	0	25	58	6.3	28.1	34.4	65.6	S	34.4
59	2	14*	17*	7	0	18	50	5.0	35.0	42.5	60.0	S	42.5
60	3	7	22*	10*	0	18	42	7.1	16.7	52.4	76.2	S	52.4
61	3	13*	15*	6	0	21	45	8.1	35.1	40.5	56.8	S	40.5
62	1	11*	16*	8*	1	21	45	2.7	29.7	43.2	64.9	S	43.2
63	1	15*	17*	7	0	17	41	2.5	37.5	42.5	60.0	S	42.5
64	1	14*	27*	7	1	8	24	2.0	28.0	54.0	68.0	S	54.0
65	1	16*	25*	10	0	7	25	1.9	30.8	48.1	67.3	S	48.1

TASK	SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
	P	T	S	E	O	N	Q2 NO	P	T	S	S+E	MO	%
31	1*	2*	1*	1*	0	0	34	20.0	40.0	20.0	40.0	T	40.0
32	0	8*	3*	1	0	0	27	0.0	66.7	25.0	33.3	T	66.7
33	0	5*	8*	0	0	0	25	0.0	38.5	61.5	61.5	S	61.5
34	0	1	12*	4*	0	0	22	0.0	5.9	70.6	94.1	S	70.6
35	0	1	4*	7*	0	0	26	0.0	8.3	33.3	91.7	E	58.3
36	0	0	4*	2*	0	0	33	0.0	0.0	66.7	100.0	S	66.7
37	1*	0	1*	1*	0	0	36	33.3	0.0	33.3	66.7	MM	0.0
38	0	1	5*	3*	0	1	29	0.0	11.1	55.6	88.9	S	55.6
39	0	4*	4*	3*	0	1	27	0.0	36.4	36.4	63.6	TS	36.4
40	1	3	12*	3	0	0	20	5.3	15.8	63.2	78.9	S	63.2
41	0	2	11*	3	0	1	22	0.0	12.5	68.8	87.5	S	68.8
42	0	1*	7*	2*	0	1	33	0.0	20.0	40.0	80.0	SE	40.0
43	0	2	7*	5*	0	0	24	6.7	13.3	46.7	80.0	S	46.7
44	0	7*	10*	4	0	0	18	0.0	33.3	47.6	66.7	S	47.6
45	0	0	0	2*	0	2	35	0.0	0.0	0.0	99.9	E	99.9
46	0	1	5*	4*	0	1	28	0.0	10.0	50.0	90.0	S	50.0
47	0	3*	3*	1	0	0	32	0.0	42.9	42.9	57.1	TS	42.9
48	0	2	4*	5*	0	0	28	0.0	18.2	36.4	81.8	E	45.5
49	0	3*	5*	4*	0	0	27	0.0	25.0	41.7	75.0	S	41.7
50	0	0	0	0	0	0	39	0.0	0.0	0.0	0.0		0.0
51	0	2*	5*	3*	0	0	29	0.0	20.0	50.0	80.0	S	50.0
52	0	13*	11*	7*	0	0	8	0.0	41.9	35.5	58.1	T	41.9
53	0	4*	6*	3*	0	0	26	0.0	30.8	46.2	69.2	S	46.2
54	0	6*	10*	3	0	0	20	0.0	31.6	52.6	68.4	S	52.6
55	0	2*	1*	1*	0	1	34	0.0	50.0	25.0	50.0	T	50.0
56	0	2	7*	7*	0	0	23	0.0	12.5	43.8	87.5	SE	43.8
57	0	6*	7*	4*	0	0	22	0.0	35.3	41.2	64.7	S	41.2
58	0	1	6*	3*	0	0	29	0.0	10.0	60.0	90.0	S	60.0
59	0	2	9*	2	0	1	25	0.0	15.4	69.2	84.6	S	69.2
60	0	3	5*	8*	0	0	23	0.0	18.8	31.3	81.3	E	50.0
61	1	2	6*	4*	0	0	26	7.7	15.4	46.2	76.9	S	46.2
62	0	2	9*	2	0	0	26	0.0	15.4	69.2	84.6	S	69.2
63	0	3*	8*	3*	0	0	25	0.0	21.4	57.1	78.6	S	57.1
64	0	5*	14*	5*	0	0	14	0.0	20.8	58.3	79.2	S	58.3
65	0	3	15*	5*	0	0	13	0.0	13.0	65.2	87.0	S	65.2

	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
TASK	P	T	S	E	O	N	Q6 NO	P	T	S	S+E	MO	%	P	T	S	E	O	N	Q2 NO	P	T	S	S+E	MO	%
66	1	19*	20*	8	0	10	36	2.1	39.6	41.7	58.3	S	41.7	1	5*	10*	1	0	0	22	5.9	29.4	58.8	64.7	S	58.8
67	1	34*	15*	8	0	2	4	1.7	58.6	25.9	39.7	T	58.6	2	19*	12*	1	0	0	5	5.9	55.9	35.3	38.2	T	55.9
68	4	29*	16*	8	0	3	5	7.0	50.9	28.1	42.1	T	50.9	4	10*	16*	2	0	0	6	12.5	31.3	50.0	56.3	S	50.0
69	7	15*	19*	10	0	8	12	13.7	29.4	37.3	56.9	S	37.3	5	7*	13*	3	0	1	9	17.9	25.0	46.4	57.1	S	46.4
70	0	12*	17*	9*	0	21	45	0.0	31.6	44.7	68.4	S	44.7	1	1	4*	1	0	0	32	14.3	14.3	57.1	71.4	S	57.1
71	3	18*	17*	10*	0	12	32	6.3	37.5	35.4	56.2	T	37.5	1	6*	9*	2	0	1	20	5.6	33.3	50.0	61.1	S	50.0
72	5	19*	26*	7	0	3	7	8.8	33.3	45.6	57.9	S	45.6	2	10*	15*	5	0	1	6	6.3	31.3	46.9	62.5	S	46.9
73	3	9*	16*	8*	0	22	54	8.3	25.0	44.4	66.7	S	44.4	0	0	2*	1*	0	0	36	0.0	0.0	66.7	100.0	S	66.7
74	3	12*	18*	6	0	19	39	7.7	30.8	46.2	61.5	S	46.2	0	2	6*	4*	0	0	27	0.0	16.7	50.0	83.3	S	50.0
75	5	12*	14*	7	0	20	34	13.2	31.6	36.8	55.3	S	36.8	0	2	6*	3*	0	0	27	0.0	18.2	54.5	81.8	S	54.5
76	5	8*	15*	8*	0	21	45	13.9	22.2	41.7	63.9	S	41.7	0	1	6*	2*	0	0	30	0.0	11.1	66.7	88.9	S	66.7
77	5	5	14*	11*	0	22	49	14.3	14.3	40.0	71.4	S	40.0	0	2*	5*	2*	0	1	29	0.0	22.2	55.6	77.8	S	55.6
78	5	21*	14*	8	0	10	13	10.4	43.8	29.2	45.8	T	43.8	1	7*	10*	2	0	0	16	5.0	35.0	50.0	60.0	S	50.0
79	1	16*	13*	8*	0	19	42	2.6	42.1	34.2	55.3	T	42.1	1	0	5*	1	0	0	31	14.3	0.0	71.4	85.7	S	71.4
80	4	12*	13*	8*	0	19	44	10.8	32.4	35.1	56.8	S	35.1	0	2*	4*	0	0	0	32	0.0	33.3	66.7	66.7	S	66.7
81	3	13*	13*	8*	0	20	46	8.1	35.1	35.1	56.8	TS	35.1	0	1*	3*	1*	0	0	33	0.0	20.0	60.0	80.0	S	60.0
82	1	15*	13*	4	0	24	53	3.0	45.5	39.4	51.5	T	45.5	0	1*	3*	0	0	0	34	0.0	25.0	75.0	75.0	S	75.0
83	1	13*	15*	6	0	22	48	2.9	37.1	42.9	60.0	S	42.9	1*	1*	2*	0	0	0	34	25.0	25.0	50.0	50.0	S	50.0
84	4	12*	20*	4	0	18	36	10.0	30.0	50.0	60.0	S	50.0	3*	4*	2	2	0	1	26	27.3	36.4	18.2	36.4	T	36.4
85	3	13*	13*	8*	0	20	51	8.1	35.1	35.1	56.8	TS	35.1	0	1*	2*	0	0	0	34	0.0	33.3	66.7	66.7	S	66.7
86	1	5	18*	12*	0	21	47	2.8	13.9	50.0	83.3	S	50.0	0	1	3*	4*	0	0	30	0.0	12.5	37.5	87.5	E	50.0
87	1	6	13*	13*	0	24	55	3.0	18.2	39.4	78.8	SE	39.4	0	1	3*	3*	0	0	30	0.0	14.3	42.9	85.7	SE	42.9
88	1	12*	10*	10*	0	23	53	3.0	36.4	30.3	60.6	T	36.4	0	1*	4*	0	0	0	33	0.0	20.0	80.0	80.0	S	80.0
89	2	9*	16*	15*	0	15	24	4.8	21.4	38.1	73.8	S	38.1	0	1	12*	4*	0	0	20	0.0	5.9	70.6	94.1	S	70.6
90	1	16*	18*	7	0	17	39	2.4	38.1	42.9	59.5	S	42.9	1	3	12*	3	0	0	19	5.3	15.8	63.2	78.9	S	63.2
91	0	8	40*	4	0	7	20	0.0	15.4	76.9	84.6	S	76.9	1	4	15*	2	0	1	14	4.5	18.2	68.2	77.3	S	68.2
92	1	9*	31*	2	0	14	32	2.3	20.9	72.1	76.7	S	72.1	0	3*	11*	1	0	1	21	0.0	20.0	73.3	80.0	S	73.3
93	4	8	31*	4	0	12	27	8.5	17.0	65.0	74.5	S	66.0	0	3	11*	2	0	1	21	0.0	18.8	68.8	81.3	S	68.8
94	1	6	26*	7	0	18	44	2.5	15.0	65.0	82.5	S	65.0	0	1*	4*	0	0	2	30	0.0	20.0	80.0	80.0	S	80.0
95	0	15*	14*	6	0	23	53	0.0	42.9	40.0	57.1	T	42.9	0	1*	0	0	0	0	37	0.0	99.9	0.0	0.0	T	99.9
96	4	12*	22*	7	0	14	37	8.9	26.7	48.9	64.4	S	48.9	0	1	5*	3*	0	0	29	0.0	11.1	55.6	88.9	S	55.6
97	2	9	35*	5	0	8	13	3.9	17.6	68.6	78.4	S	68.6	0	3	18*	2	0	1	11	0.0	13.0	78.3	87.0	S	78.3
98	2	13*	17*	4	0	22	51	5.6	36.1	47.2	58.3	S	47.2	0	1*	1*	0	0	0	36	0.0	50.0	50.0	50.0	TS	50.0
99	2	10*	20*	5	1	21	37	5.3	26.3	52.6	65.8	S	52.6	0	1*	1*	3*	0	2	31	0.0	20.0	20.0	80.0	E	60.0
100	1	8	30*	6	0	14	29	2.2	17.8	66.7	80.0	S	66.7	0	2	11*	2	0	2	20	0.0	13.3	73.3	86.7	S	73.3

TASK	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
	P	I	S	E	O	N	Q6 NO	P	I	S	S+E	MO	%	P	I	S	E	O	N	Q2 NO	P	I	S	S+E	MO	%
101	3	9	32*	5	0	10	15	6.1	18.4	65.3	75.5	S	65.3	1	4	15*	1	0	2	15	4.8	19.0	71.4	76.2	S	71.4
102	3	16*	23*	4	0	13	31	6.5	34.8	50.0	58.7	S	50.0	1	5*	6*	2	0	2	22	7.1	35.7	42.9	57.1	S	42.9
103	2	15*	15*	5	0	21	51	5.4	40.5	40.5	54.1	TS	40.5	0	2*	2*	1*	0	6	33	0.0	40.0	40.0	60.0	TS	40.0
104	2	11*	17*	5	0	23	50	5.7	31.4	48.6	62.9	S	48.6	0	1	3*	2*	0	0	31	0.0	16.7	50.0	83.3	S	50.0
105	2	12*	16*	5	0	23	55	5.7	34.3	45.7	60.0	S	45.7	0	1*	0	0	0	0	37	0.0	99.9	0.0	0.0	I	99.9
106	0	13*	18*	4	0	23	51	0.0	37.1	51.4	62.9	S	51.4	2*	1	4*	1	0	0	30	25.0	12.5	50.0	62.5	S	50.0
107	1	7*	18*	9*	0	23	48	2.9	20.0	51.4	77.1	S	51.4	1	1	8*	3*	0	0	25	7.7	7.7	61.5	84.6	S	61.5
108	1	14*	15*	7	0	22	45	2.7	37.8	40.5	59.5	S	40.5	1	3*	3*	2*	0	0	29	11.1	33.3	33.3	55.6	TS	33.3
109	2	9*	15*	8*	0	24	53	5.9	26.5	44.1	67.6	S	44.1	0	3*	1*	1*	0	0	33	0.0	60.0	20.0	40.0	I	60.0
110	1	9*	29*	6	0	13	22	2.2	20.0	64.4	77.8	S	64.4	0	4*	10*	3	0	0	20	0.0	23.5	58.8	76.5	S	58.8
111	1	9*	17*	6	0	26	54	3.0	27.3	51.5	69.7	S	51.5	0	1*	1*	1*	0	1	34	0.0	33.3	33.3	66.7	MM	0.0
112	1	6	17*	8*	0	25	49	3.1	18.8	53.1	78.1	S	53.1	1	1	4*	1	0	0	31	14.3	14.3	57.1	71.4	S	57.1
113	0	13*	12*	8*	0	25	57	0.0	39.4	36.4	60.6	I	39.4	1*	0	1*	0	0	0	36	50.0	0.0	50.0	50.0	PS	50.0
114	1	7*	18*	9*	0	22	39	2.9	20.0	51.4	77.1	S	51.4	1	2	8*	1	0	0	26	8.3	16.7	66.7	75.0	S	66.7
115	0	8*	18*	9*	0	23	43	0.0	22.9	51.4	77.1	S	51.4	0	1	5*	3*	0	0	28	0.0	11.1	55.6	88.9	S	55.6
116	1	8*	21*	8*	0	19	34	2.6	21.1	55.3	76.3	S	55.3	0	2*	2*	0	0	1	33	0.0	50.0	50.0	50.0	TS	50.0
117	2	43*	9	6	0	0	5	3.3	71.7	15.0	25.0	I	71.7	1	28*	6	2	0	0	0	2.7	75.7	16.2	21.6	I	75.7
118	4	26*	19*	7	0	4	8	7.1	46.4	33.9	46.4	I	46.4	4	14*	11*	4	0	3	1	12.1	42.4	33.3	45.5	I	42.4
119	3	36*	17*	3	0	1	4	5.1	61.0	28.8	33.9	I	61.0	2	24*	6	4	0	0	1	5.6	66.7	16.7	27.8	I	66.7
120	1	43*	11	5	0	0	6	1.7	71.7	18.3	26.7	I	71.7	0	30*	5	1	0	0	2	0.0	83.3	13.9	16.7	I	83.3
121	5	41*	10	4	0	0	8	8.3	68.3	16.7	23.3	I	68.3	0	31*	3	1	0	0	2	0.0	88.6	8.6	11.4	I	88.6
122	0	46*	8	6	0	0	16	0.0	76.7	13.3	23.3	I	76.7	0	25*	2	1	0	0	8	0.0	89.3	7.1	10.7	I	89.3
123	0	46*	8	6	0	0	11	0.0	76.7	13.3	23.3	I	76.7	0	32*	2	2	0	0	1	0.0	88.9	5.6	11.1	I	88.9
124	0	48*	9	3	0	0	11	0.0	80.0	15.0	20.0	I	80.0	0	33*	3	1	0	0	2	0.0	89.2	8.1	10.8	I	89.2
125	4	27*	21*	6	0	2	2	6.9	46.6	36.2	46.6	I	46.6	2	16*	16*	5	0	0	0	5.1	41.0	41.0	53.8	TS	41.0
126	0	44*	11	4	0	1	9	0.0	74.6	18.6	25.4	I	74.6	0	29*	3	2	0	0	5	0.0	85.3	8.8	14.7	I	85.3
127	4	30*	19*	5	0	1	3	6.9	51.7	32.8	41.4	I	51.7	2	20*	10*	7	0	0	0	5.1	51.3	25.6	43.6	I	51.3
128	0	51*	7	2	0	0	10	0.0	85.0	11.7	15.0	I	85.0	0	33*	2	1	0	0	3	0.0	91.7	5.6	8.3	I	91.7
129	1	46*	7	4	0	1	27	1.7	79.3	12.1	19.0	I	79.3	0	19*	3	0	0	0	17	0.0	86.4	13.6	13.6	I	86.4
130	0	49*	5	5	0	0	13	0.0	83.1	8.5	16.9	I	83.1	0	25*	3	0	0	0	11	0.0	89.3	10.7	10.7	I	89.3
131	0	50*	6	4	0	0	6	0.0	83.3	10.0	16.7	I	83.3	1	28*	3	1	0	0	6	3.0	84.8	9.1	12.1	I	84.8
132	1	46*	11	2	0	0	4	1.7	76.7	18.3	21.7	I	76.7	1	29*	5	2	0	0	2	2.7	78.4	13.5	18.9	I	78.4
133	1	46*	8	4	1	0	7	1.7	76.7	13.3	20.0	I	76.7	0	28*	7	2	0	0	2	0.0	75.7	18.9	24.3	I	75.7
134	0	41*	10	3	1	3	38	0.0	74.5	18.2	23.6	I	74.5	0	13*	2	0	0	0	24	0.0	86.7	13.3	13.3	I	86.7
135	0	41*	9	4	1	1	32	0.0	74.5	16.4	23.6	I	74.5	0	13*	2	0	0	0	24	0.0	86.7	13.3	13.3	I	86.7

	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
TASK	P	T	S	E	O	N	Q6 NO	P	T	S	S+E	MO	%	P	T	S	E	O	N	Q2 NO	P	T	S	S+E	MO	%
136	4	33*	17*	5	0	0	6	6.8	55.9	28.8	37.3	T	55.9	3	20*	8*	6	0	0	2	8.1	54.1	21.6	37.8	T	54.1
137	0	46*	10	3	1	0	13	0.0	76.7	16.7	21.7	T	76.7	0	27*	4	1	0	0	7	0.0	84.4	12.5	15.6	T	84.4
138	0	49*	8	3	0	0	10	0.0	81.7	13.3	18.3	T	81.7	0	31*	4	1	0	0	3	0.0	86.1	11.1	13.9	T	86.1
139	1	50*	8	1	0	0	10	1.7	83.3	13.3	15.0	T	83.3	0	31*	4	1	0	0	3	0.0	86.1	11.1	13.9	T	86.1
140	3	29*	22*	5	0	1	6	5.1	49.2	37.3	45.8	T	49.2	2	18*	13*	6	0	0	0	5.1	46.2	33.3	48.7	T	46.2
141	1	36*	17*	4	1	1	7	1.7	61.0	28.8	35.6	T	61.0	1	26*	8*	2	0	0	2	2.7	70.3	21.6	27.0	T	70.3
142	0	37*	15*	4	2	2	20	0.0	63.8	25.9	32.8	T	63.8	0	26*	5	1	0	0	7	0.0	81.3	15.6	18.8	T	81.3
143	1	37*	18*	4	0	0	4	1.7	61.7	30.0	36.7	T	61.7	1	25*	11*	2	0	0	0	2.6	64.1	28.2	33.3	T	64.1
144	1	41*	15*	3	0	0	8	1.7	68.3	25.0	30.0	T	68.3	0	27*	8*	1	0	0	3	0.0	75.0	22.2	25.0	T	75.0
145	4	25*	24*	7	0	0	6	6.7	41.7	40.0	51.7	T	41.7	3	19*	12*	3	0	1	0	8.1	51.4	32.4	40.5	T	51.4
146	0	40*	16*	4	0	0	5	0.0	66.7	26.7	33.3	T	66.7	0	28*	6	2	0	0	3	0.0	77.8	16.7	22.2	T	77.8
147	3	28*	23*	4	0	1	4	5.1	47.5	39.0	47.5	T	47.5	1	25*	6	4	0	1	2	2.8	69.4	16.7	27.8	T	69.4
148	0	50*	7	3	0	0	9	0.0	83.3	11.7	16.7	T	83.3	0	33*	2	1	0	0	3	0.0	91.7	5.6	8.3	T	91.7
149	1	48*	9	2	0	0	9	1.7	80.0	15.0	18.3	T	80.0	0	32*	3	1	0	0	3	0.0	88.9	8.3	11.1	T	88.9
150	2	29*	22*	6	1	1	5	8.5	42.4	27.3	47.5	T	42.4	2	18*	9*	8*	0	2	0	5.4	48.6	24.3	45.9	T	48.6
151	0	48*	9	3	0	0	6	0.0	80.0	15.0	20.0	T	80.0	0	31*	4	1	0	0	3	0.0	86.1	11.1	13.9	T	86.1
152	1	47*	10	2	0	0	10	1.7	78.3	16.7	20.0	T	78.3	0	31*	3	2	0	0	2	0.0	86.1	8.3	13.9	T	86.1
153	0	44*	11	3	0	2	21	0.0	75.9	19.0	24.1	T	75.9	0	23*	3	1	0	0	12	0.0	85.2	11.1	14.8	T	85.2
154	0	44*	10	3	0	3	28	0.0	77.2	17.5	22.8	T	77.2	0	13*	4*	1	0	0	21	0.0	72.2	22.2	27.8	T	72.2
155	1	41*	14*	3	1	0	3	1.7	68.3	23.3	28.3	T	68.3	0	25*	8*	4	0	1	1	0.0	67.6	21.6	32.4	T	67.6
156	1	44*	13*	2	0	0	9	1.7	73.3	21.7	25.0	T	73.3	0	31*	4	2	0	0	2	0.0	83.8	10.8	16.2	T	83.8
157	0	47*	11	2	0	0	10	0.0	78.3	18.3	21.7	T	78.3	0	31*	4	1	0	0	3	0.0	86.1	11.1	13.9	T	86.1
158	0	46*	11	3	0	0	11	0.0	76.7	18.3	23.3	T	76.7	0	31*	4	1	0	0	3	0.0	86.1	11.1	13.9	T	86.1
159	0	48*	10	2	0	0	14	0.0	80.0	16.7	20.0	T	80.0	0	29*	3	1	0	0	6	0.0	87.9	9.1	12.1	T	87.9
160	2	38*	16*	4	0	0	4	3.3	63.3	26.7	33.3	T	63.3	2	27*	8*	2	0	0	0	5.1	69.2	20.5	25.6	T	69.2
161	1	36*	4	9	1	7	47	2.0	70.6	7.8	25.5	T	70.6	0	4*	0	3*	0	0	32	0.0	57.1	0.0	42.9	T	57.1
162	4	32*	20*	4	0	0	4	6.7	53.3	33.3	40.0	T	53.3	2	19*	15*	2	0	0	1	5.3	50.0	39.5	44.7	T	50.0
163	3	34*	19*	4	0	0	4	5.0	56.7	31.7	38.3	T	56.7	2	21*	13*	2	0	0	1	5.3	55.3	34.2	39.5	T	55.3
164	0	44*	9	4	0	3	25	0.0	77.2	15.8	22.8	T	77.2	0	14*	8*	1	0	0	16	0.0	60.9	34.8	39.1	T	60.9
165	1	42*	9	3	1	4	41	1.8	75.0	16.1	21.4	T	75.0	0	10*	3*	0	0	0	26	0.0	76.9	23.1	23.1	T	76.9
166	1	31*	24*	4	0	0	4	1.7	51.7	40.0	46.7	T	51.7	0	18*	18*	2	0	0	1	0.0	47.4	47.4	52.6	TS	47.4
167	0	39*	12*	5	1	3	28	0.0	68.4	21.1	29.8	T	68.4	0	15*	6*	1	0	0	17	0.0	68.2	27.3	31.8	T	68.2
168	2	38*	16*	3	0	1	9	3.4	64.4	27.1	32.2	T	64.4	0	28*	6	3	0	0	2	0.0	75.7	16.2	24.3	T	75.7
169	2	25*	28*	3	0	2	5	3.4	43.1	48.3	53.4	S	48.3	2	13*	17*	6	0	0	1	5.3	34.2	44.7	60.5	S	44.7
170	4	24*	26*	3	0	3	11	7.0	42.1	45.6	50.9	S	45.6	3	15*	13*	4	0	1	2	8.6	42.9	37.1	48.6	T	42.9

TASK	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
	P	I	S	E	O	N	Q6 NO	P	I	S	S+E	MO	%	P	I	S	E	O	N	Q2 NO	P	I	S	S+E	MO	%
171	0	40*	16*	3	0	0	8	0.0	67.8	27.1	32.2	I	67.8	0	20*	14*	1	0	0	3	0.0	57.1	40.0	42.9	I	57.1
172	0	37*	16*	4	0	3	28	0.0	64.9	28.1	35.1	I	64.9	0	18*	2	3	0	0	16	0.0	78.3	8.7	21.7	I	78.3
173	1	37*	19*	3	0	0	7	1.7	61.7	31.7	36.7	I	61.7	0	24*	11*	3	0	0	1	0.0	63.2	28.9	36.8	I	63.2
174	0	46*	8	3	0	3	30	0.0	80.7	14.0	19.3	I	80.7	0	12*	5*	1	0	0	21	0.0	66.7	27.8	33.3	I	66.7
175	1	50*	6	3	0	0	14	1.7	83.3	10.0	15.0	I	83.3	0	30*	6	1	0	0	2	0.0	81.1	16.2	18.9	I	81.1
176	0	41*	12*	4	0	3	17	0.0	71.9	1.1	28.1	I	71.9	0	25*	4	1	0	0	9	0.0	83.3	13.3	16.7	I	83.3
177	1	47*	8	2	0	1	12	1.7	81.0	13.8	17.2	I	81.0	0	33*	3	1	0	0	2	0.0	89.2	8.1	10.8	I	89.2
178	0	51*	7	2	0	0	17	0.0	85.0	11.7	15.0	I	85.0	0	30*	4	1	0	0	4	0.0	85.7	11.4	14.3	I	85.7
179	1	39*	17*	2	0	1	11	1.7	66.1	28.8	32.2	I	66.1	0	28*	7	2	0	0	2	0.0	75.7	16.9	24.3	I	75.7
180	0	44*	10	3	1	2	23	0.0	75.9	17.2	22.4	I	75.9	0	23*	3	1	0	0	11	0.0	85.2	11.1	14.8	I	85.2
181	2	38*	17*	3	0	0	5	3.3	63.3	28.3	33.3	I	63.3	2	27*	7	2	0	0	1	5.3	71.1	18.4	23.7	I	71.1
182	3	34*	21*	2	0	0	6	5.0	56.7	35.0	38.3	I	56.7	1	26*	8*	2	0	0	2	2.7	70.3	21.6	27.0	I	70.3
183	4	32*	21*	2	0	1	6	6.8	54.2	35.6	39.0	I	54.2	3	20*	11*	5	0	0	0	7.7	51.3	28.2	41.0	I	51.3
184	2	32*	21*	3	0	1	7	3.4	55.2	36.2	41.4	I	55.2	1	24*	11*	2	0	0	1	2.6	63.2	28.9	34.2	I	63.2
185	3	39*	16*	2	0	0	11	5.0	65.0	26.7	30.0	I	65.0	2	28*	5	2	0	0	2	5.4	75.7	13.5	18.9	I	75.7
186	1	39*	16*	3	0	1	10	1.7	66.1	27.1	32.2	I	66.1	1	27*	5	3	0	0	3	2.8	75.0	13.9	22.2	I	75.0
187	1	39*	17*	2	1	0	5	1.7	65.0	28.3	31.7	I	65.0	1	29*	7	1	0	0	1	2.6	76.3	18.4	21.1	I	76.3
188	2	28*	27*	2	1	0	4	3.3	46.7	45.0	48.3	I	46.7	2	19*	14*	2	0	1	1	5.4	51.4	37.8	43.2	I	51.4
189	2	35*	20*	3	0	0	5	3.3	58.3	33.3	38.3	I	58.3	2	26*	7	3	0	0	1	5.3	68.4	18.4	26.3	I	68.4
190	2	27*	28*	2	1	0	7	3.3	45.0	46.7	50.0	S	46.7	3	18*	15*	3	0	0	0	7.7	46.2	38.5	46.2	I	46.2
191	0	33*	20*	6	0	0	7	0.0	55.9	33.9	44.1	I	55.9	1	21*	13*	2	0	0	1	2.7	56.8	35.1	40.5	I	56.8
192	2	34*	9	5	1	9	43	3.9	66.7	17.6	27.5	I	66.7	0	4*	2*	2*	0	0	31	0.0	50.0	25.0	50.0	I	50.0
193	1	42*	6	4	2	5	37	1.8	76.4	10.9	18.2	I	76.4	0	6*	3*	2	0	0	28	0.0	54.5	27.3	45.5	I	54.5
194	0	38*	15*	4	0	3	18	0.0	66.7	26.3	33.3	I	66.7	1	16*	10*	3	0	0	8	3.3	53.3	33.3	43.3	I	53.3
195	1	31*	22*	5	0	1	6	1.7	52.5	37.3	45.8	I	52.5	1	16*	14*	2	0	1	5	3.0	48.5	42.4	48.5	I	48.5
196	1	33*	20*	6	0	0	6	1.7	55.0	33.3	43.3	I	55.0	2	20*	10*	2	0	0	5	5.9	58.8	29.4	35.3	I	58.8
197	2	35*	16*	5	0	1	7	3.4	60.3	27.6	36.2	I	60.3	0	28*	8*	2	0	0	1	0.0	73.7	21.1	26.3	I	73.7
198	0	32*	23*	3	0	2	7	0.0	55.2	39.7	44.8	I	55.2	0	20*	10*	8*	0	0	1	0.0	52.6	26.3	47.4	I	52.6
199	0	47*	8	4	0	1	9	0.0	79.7	13.6	20.3	I	79.7	0	23*	9*	2	0	0	5	0.0	67.6	26.5	32.4	I	67.6
200	0	42*	13*	3	0	2	15	0.0	72.4	22.4	27.6	I	72.4	0	23*	10*	1	0	0	5	0.0	67.6	29.4	32.4	I	67.6
201	2	45*	7	3	1	2	14	3.4	77.6	12.1	17.2	I	77.6	0	16*	5*	0	0	0	18	0.0	76.2	23.8	23.8	I	76.2
202	1	50*	5	3	0	1	16	1.7	84.7	8.5	13.6	I	84.7	0	27*	8*	1	0	0	3	0.0	75.0	22.2	25.0	I	75.0
203	0	28*	26*	2	2	2	18	0.0	48.3	44.8	48.3	I	48.3	1	15*	16*	0	0	0	7	3.1	46.9	50.0	50.0	S	50.0
204	0	51*	6	2	0	1	12	0.0	86.4	10.2	13.6	I	86.4	0	31*	4	1	0	0	2	0.0	86.1	11.1	13.9	I	86.1
205	0	49*	6	3	0	1	15	0.0	84.5	10.3	15.5	I	84.5	0	31*	4	1	0	0	3	0.0	86.1	11.1	13.9	I	86.1

TASK	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
	P	T	S	E	O	N	QG NO	P	T	S	S+E	MO	%	P	T	S	E	O	N	QZ NO	P	T	S	S+E	MO	%
206	1	47*	10	2	0	0	7	1.7	78.3	16.7	20.0	T	78.3	0	21*	16*	1	0	0	1	0.0	55.3	42.1	44.7	T	55.3
207	0	31*	23*	4	1	0	10	0.0	52.5	39.0	45.8	T	52.5	0	23*	13*	1	0	0	2	0.0	62.2	35.1	37.8	T	62.2
208	0	33*	23*	4	0	0	9	0.0	55.0	38.3	45.0	T	55.0	0	22*	13*	1	0	0	3	0.0	61.1	36.1	38.9	T	61.1
209	0	29*	24*	6	1	0	3	0.0	48.3	40.0	50.0	T	48.3	2	21*	13*	2	0	0	1	5.3	55.3	34.2	39.5	T	55.3
210	1	38*	15*	6	0	0	5	1.7	63.3	25.0	35.0	T	63.3	0	25*	12*	1	0	0	1	0.0	65.8	31.6	34.2	T	65.8
211	1	34*	20*	4	1	0	9	1.7	56.7	33.3	40.0	T	56.7	0	23*	13*	1	0	0	2	0.0	62.2	35.1	37.8	T	62.2
212	1	30*	21*	7	0	1	5	1.7	50.8	35.6	47.5	T	50.8	1	21*	11*	2	0	1	3	2.9	60.0	31.4	37.1	T	60.0
213	1	24*	31*	4	0	0	5	1.7	40.0	51.7	58.3	S	51.7	2	18*	17*	1	0	0	1	5.3	47.4	44.7	47.4	T	47.4
214	1	35*	14*	7	0	2	8	1.8	61.4	24.6	36.8	T	61.4	0	18*	13*	3	0	0	5	0.0	52.9	38.2	47.1	T	52.9
215	2	49*	4	5	0	0	8	3.3	81.7	6.7	15.0	T	81.7	0	35*	2	1	0	0	1	0.0	92.1	5.3	7.9	T	92.1
216	0	48*	7	5	0	0	4	0.0	80.0	11.7	20.0	T	80.0	0	29*	8*	2	0	0	0	0.0	74.4	20.5	25.6	T	74.4
217	3	30*	22*	4	0	1	8	5.1	50.8	37.3	44.1	T	50.8	2	22*	12*	3	0	0	0	5.1	56.4	30.8	38.5	T	56.4
218	1	50*	6	3	0	0	5	1.7	83.3	10.0	15.0	T	83.3	0	30*	6	2	0	0	1	0.0	78.9	15.8	21.1	T	78.9
219	2	40*	12*	5	1	0	6	3.3	66.7	20.0	28.3	T	66.7	0	28*	10*	1	0	0	0	0.0	71.8	25.6	28.2	T	71.8
220	1	44*	11	3	1	0	6	1.7	73.3	18.3	23.3	T	73.3	0	32*	6	1	0	0	0	0.0	82.1	15.4	17.9	T	82.1
221	0	34*	19*	5	1	0	5	0.0	57.6	32.2	40.7	T	57.6	1	26*	10*	2	0	0	0	2.6	66.7	25.6	30.8	T	66.7
222	0	45*	9	6	0	0	8	0.0	75.0	15.0	25.0	T	75.0	0	33*	5	1	0	0	0	0.0	84.6	12.8	15.4	T	84.6
223	0	40*	13*	7	0	0	5	0.0	66.7	21.7	33.3	T	66.7	0	31*	7	1	0	0	0	0.0	79.5	17.9	20.5	T	79.5
224	0	34*	21*	5	0	0	4	0.0	56.7	35.0	43.3	T	56.7	0	27*	8*	1	0	1	2	0.0	75.0	22.2	25.0	T	75.0
225	0	50*	8	2	0	0	5	0.0	83.3	13.3	16.7	T	83.3	0	31*	6	2	0	0	0	0.0	79.5	15.4	20.5	T	79.5
226	0	47*	10	3	0	0	7	0.0	78.3	16.7	21.7	T	78.3	0	33*	4	1	0	0	1	0.0	86.8	10.5	13.2	T	86.8
227	1	51*	5	3	0	0	5	1.7	85.0	8.3	13.3	T	85.0	0	34*	2	1	0	0	1	0.0	91.9	5.4	8.1	T	91.9
228	1	23*	29*	6	0	0	7	1.7	39.0	49.2	59.3	S	49.2	0	20*	15*	2	0	0	2	0.0	54.1	40.5	45.9	T	54.1
229	0	29*	23*	7	0	0	4	0.0	49.2	39.0	50.8	T	49.2	0	25*	11*	1	0	1	1	0.0	67.6	29.7	32.4	T	67.6
230	1	26*	26*	4	0	1	3	1.8	45.6	45.6	52.6	TS	45.6	0	20*	17*	2	0	0	0	0.0	51.3	43.6	48.7	T	51.3
231	0	43*	12*	3	0	0	9	0.0	74.1	20.7	25.9	T	74.1	0	27*	5	2	0	0	5	0.0	79.4	14.7	20.6	T	79.4
232	0	48*	7	3	0	1	4	0.0	82.8	12.1	17.2	T	82.8	0	30*	7	1	0	0	1	0.0	78.9	18.4	21.1	T	78.9
233	0	37*	18*	4	0	0	4	0.0	62.7	30.5	37.3	T	62.7	0	28*	8*	1	0	0	2	0.0	75.7	21.6	24.3	T	75.7
234	0	43*	13*	3	0	0	7	0.0	72.9	22.0	27.1	T	72.9	0	26*	10*	0	0	0	1	0.0	68.4	26.3	31.6	T	68.4
235	1	30*	23*	5	0	0	7	1.7	50.8	39.0	47.5	T	50.8	0	21*	13*	3	0	0	2	0.0	56.8	35.1	43.2	T	56.8
236	3	21*	27*	5	1	2	4	5.3	36.8	47.4	56.1	S	47.4	1	15*	18*	2	0	2	1	2.8	41.7	50.0	55.6	S	50.0
237	1	26*	29*	3	0	0	5	1.7	44.1	49.2	54.2	S	49.2	2	20*	13*	2	0	2	0	5.4	54.1	35.1	40.5	T	54.1
238	6	17*	26*	4	1	5	4	11.1	31.5	48.1	55.6	S	48.1	3	15*	12*	2	0	6	1	9.4	46.9	37.5	43.8	T	46.9
239	1	25*	29*	4	0	1	5	1.7	42.4	49.2	55.9	S	49.2	1	24*	9*	3	0	2	0	2.7	64.9	24.3	32.4	T	64.9
240	0	25*	32*	3	0	0	3	0.0	41.7	53.3	58.3	S	53.3	2	15*	17*	2	0	2	1	5.6	41.7	47.2	52.8	S	47.2

TASK	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
	P	I	S	E	O	N	Q6 NO	P	I	S	S+E	MO	%	P	I	S	E	O	N	Q2 NO	P	I	S	S+E	MO	%
241	1	29*	24*	6	0	0	3	1.7	48.3	40.0	50.0	I	48.3	1	22*	12*	3	0	0	1	2.6	57.9	31.6	39.5	I	57.9
242	1	29*	24*	4	1	1	3	1.7	49.2	40.7	47.5	I	49.2	3	18*	14*	2	0	2	0	8.1	48.6	37.8	43.2	I	48.6
243	0	42*	14*	2	1	1	7	0.0	71.2	23.7	27.1	I	71.2	1	28*	6	2	0	0	2	2.7	75.7	16.2	21.6	I	75.7
244	1	44*	12*	3	0	0	4	1.7	73.3	20.0	25.0	I	73.3	2	27*	7	3	0	0	0	5.1	69.2	17.9	25.6	I	69.2
245	0	40*	15*	2	1	2	11	0.0	69.0	25.9	29.3	I	69.0	0	25*	9*	0	0	0	5	0.0	73.5	26.5	26.5	I	73.5
246	1	44*	11	2	0	2	25	1.7	75.9	19.0	22.4	I	75.9	0	21*	4	1	0	0	13	0.0	80.8	15.4	19.2	I	80.8
247	1	39*	14*	6	0	0	5	1.7	65.0	23.3	33.3	I	65.0	1	26*	9*	1	0	0	2	2.7	70.3	24.3	27.0	I	70.3
248	1	37*	17*	4	1	0	8	1.7	61.7	28.3	35.0	I	61.7	0	27*	8*	2	0	0	2	0.0	73.0	21.6	27.0	I	73.0
249	3	37*	15*	5	0	0	4	5.0	61.7	25.0	33.3	I	61.7	2	29*	8*	1	0	0	0	5.1	71.8	20.5	23.1	I	71.8
250	1	43*	10	4	0	2	20	1.7	74.1	17.2	24.1	I	74.1	0	18*	5*	1	0	0	15	0.0	75.0	20.8	25.0	I	75.0
251	1	35*	18*	6	0	0	5	1.7	58.3	30.0	40.0	I	58.3	0	14*	17*	1	0	0	7	0.0	43.8	53.1	56.3	S	53.1
252	0	46*	6	5	0	3	31	0.0	80.7	10.5	19.3	I	80.7	0	11*	5*	1	0	0	22	0.0	64.7	29.4	35.3	I	64.7
253	0	37*	17*	5	1	0	6	0.0	61.7	28.3	35.0	I	61.7	1	30*	6	1	0	0	1	2.6	78.9	15.8	18.4	I	78.9
254	0	26*	28*	5	0	0	2	0.0	44.1	47.5	55.9	S	47.5	0	20*	16*	2	0	1	0	0.0	52.6	42.1	47.4	I	52.6
255	1	39*	15*	5	0	0	5	1.7	65.0	25.0	33.3	I	65.0	0	26*	10*	3	0	0	0	0.0	66.7	25.6	33.3	I	66.7
256	3	22*	28*	5	0	2	2	5.2	37.9	48.3	56.9	S	48.3	2	15*	10*	10*	0	2	0	5.4	40.5	27.0	54.1	I	40.5
257	0	30*	26*	4	0	0	2	0.0	50.0	43.3	50.0	I	50.0	2	18*	16*	3	0	0	0	5.1	46.2	41.0	48.7	I	46.2
258	0	30*	24*	5	0	1	6	0.0	50.8	40.7	49.2	I	50.8	1	21*	13*	3	0	0	1	2.6	55.3	34.2	42.1	I	55.3
259	1	42*	12*	5	0	0	8	1.7	70.0	28.3	28.3	I	70.0	0	26*	6	3	0	0	3	0.0	74.3	17.1	25.7	I	74.3
260	0	42*	12*	4	0	2	18	0.0	72.4	20.7	27.6	I	72.4	0	20*	4	1	0	0	14	0.0	80.0	16.0	20.0	I	80.0
261	0	48*	8	4	0	0	8	0.0	80.0	13.3	20.0	I	80.0	0	28*	9*	2	0	0	0	0.0	71.8	23.1	28.2	I	71.8
262	0	34*	21*	5	0	0	5	0.0	56.7	35.0	43.3	I	56.7	1	24*	11*	2	0	0	1	2.6	63.2	28.9	34.2	I	63.2
263	1	35*	20*	4	0	0	2	1.7	58.3	33.3	40.0	I	58.3	1	27*	8*	2	0	0	1	2.6	71.1	21.1	26.3	I	71.1
264	0	45*	10	1	1	3	23	0.0	78.9	17.5	19.3	I	78.9	0	18*	4	1	0	0	16	0.0	78.3	17.4	21.7	I	78.3
265	1	46*	5	4	1	3	32	1.8	80.7	8.8	15.8	I	80.7	0	12*	5*	1	0	0	21	0.0	66.7	27.8	33.3	I	66.7
266	0	44*	8	4	1	3	27	0.0	77.2	14.0	21.1	I	77.2	0	13*	6*	1	0	0	19	0.0	65.0	30.0	35.0	I	65.0
267	0	44*	7	5	1	3	29	0.0	77.2	12.3	21.1	I	77.2	0	13*	5*	1	0	0	20	0.0	68.4	26.3	31.6	I	68.4
268	2	23*	30*	4	0	1	3	3.4	39.0	50.8	57.6	S	50.8	2	13*	14*	5	0	2	3	5.9	38.2	41.2	55.9	S	41.2
269	0	41*	12*	4	1	2	29	0.0	70.7	20.7	27.6	I	70.7	0	12*	3	2	0	0	22	0.0	70.6	17.6	29.4	I	70.6
270	1	49*	7	3	0	0	6	1.7	81.7	11.7	16.7	I	81.7	0	34*	3	1	0	0	1	0.0	89.5	7.9	10.5	I	89.5
271	1	48*	8	3	0	0	7	1.7	80.0	13.3	18.3	I	80.0	0	30*	7	1	0	0	0	0.0	78.9	18.4	21.1	I	78.9
272	1	44*	5	4	2	4	41	1.8	78.6	8.9	16.1	I	78.6	0	8*	4*	1	0	0	26	0.0	61.5	30.8	38.5	I	61.5
273	1	35*	17*	5	0	1	17	1.7	60.3	29.3	37.9	I	60.3	0	16*	8*	0	0	0	15	0.0	66.7	33.3	33.3	I	66.7
274	0	39*	17*	4	0	0	4	0.0	65.0	28.3	35.0	I	65.0	0	23*	9*	2	0	0	5	0.0	67.6	26.5	32.4	I	67.6
275	4	23*	24*	7	0	2	8	6.9	39.7	41.4	53.4	S	41.4	3	15*	16*	2	0	2	1	8.3	41.7	44.4	50.0	S	44.4

TASK	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
	P	T	S	E	O	N	Q6 NO	P	T	S	S+E	NO	%	P	T	S	E	O	N	Q2 NO	P	T	S	S+E	NO	%
276	3	24*	26*	6	0	1	5	5.1	40.7	44.1	54.2	S	44.1	4	13*	14*	2	0	2	4	12.1	39.4	42.4	48.5	S	42.4
277	3	22*	25*	6	1	3	8	5.3	38.6	43.9	54.4	S	43.9	4	12*	16*	2	0	2	3	11.8	35.3	47.1	52.9	S	47.1
278	3	23*	23*	7	0	3	11	5.4	41.1	41.1	53.6	TS	41.1	3	20*	6	5	0	0	5	8.8	58.8	17.6	32.4	T	58.8
279	2	27*	22*	7	0	2	7	3.4	46.6	37.9	50.0	T	46.6	3	20*	10*	1	0	1	4	8.8	58.8	29.4	32.4	T	58.8
280	2	35*	15*	5	1	2	24	3.4	60.3	25.9	34.5	T	60.3	0	13*	9*	1	0	0	16	0.0	56.5	39.1	43.5	T	56.5
281	4	20*	23*	8	1	4	4	7.1	35.7	41.1	55.4	S	41.1	5	13*	17*	1	0	2	1	13.9	36.1	47.2	50.0	S	47.2
282	4	19*	26*	8	0	3	10	7.0	33.3	45.6	59.6	S	45.6	4	13*	16*	4	0	1	1	10.8	35.1	43.2	54.1	S	43.2
283	2	26*	27*	4	0	1	10	3.4	44.1	45.8	52.5	S	45.8	2	22*	11*	1	0	0	3	5.6	61.1	30.6	33.3	T	61.1
284	4	20*	24*	7	1	4	4	7.1	35.7	42.9	55.4	S	42.9	3	13*	18*	2	0	2	1	8.3	36.1	50.0	55.6	S	50.0
285	5	21*	23*	7	0	4	5	8.9	37.5	41.1	53.6	S	41.1	4	13*	17*	2	0	2	1	11.1	36.1	47.2	52.8	S	47.2
286	1	27*	26*	5	0	1	8	1.7	45.8	44.1	52.5	T	45.8	3	16*	14*	3	0	0	3	8.3	44.4	38.9	47.2	T	44.4
287	2	27*	23*	6	0	2	7	3.4	46.6	39.7	50.0	T	46.6	2	19*	15*	1	0	0	1	7.9	50.0	39.5	42.1	T	50.0
288	0	27*	19*	11	0	3	20	0.0	47.4	33.3	52.6	T	47.4	2	18*	8*	2	0	0	9	6.7	60.0	26.7	33.3	T	60.0
289	3	24*	25*	5	1	2	7	5.2	41.4	43.1	51.7	S	43.1	3	18*	13*	3	0	1	1	8.1	48.6	35.1	43.2	T	48.6
290	4	25*	22*	7	0	2	5	6.9	43.1	37.9	50.0	T	43.1	2	22*	12*	2	0	0	1	5.3	57.9	31.6	36.8	T	57.9
291	0	47*	7	4	0	0	8	0.0	81.0	12.1	19.0	T	81.0	0	32*	2	2	0	0	3	0.0	88.9	5.6	11.1	T	88.9
292	1	42*	10	4	0	0	11	1.8	73.7	17.5	24.6	T	73.7	0	30*	2	2	0	0	5	0.0	88.2	5.9	11.8	T	88.2
293	0	40*	12*	5	1	0	6	0.0	69.0	20.7	29.3	T	69.0	0	27*	8*	3	0	0	1	0.0	71.1	21.1	28.9	T	71.1
294	3	25*	24*	4	0	4	17	5.4	44.6	42.9	50.0	T	44.6	1	14*	6*	3	0	2	13	4.2	58.3	25.0	37.5	T	58.3
295	1	27*	24*	7	0	1	10	1.7	45.8	40.7	52.5	T	45.8	3	21*	9*	1	0	1	3	8.8	61.8	26.5	29.4	T	61.8
296	1	47*	5	4	0	3	19	1.8	82.5	8.8	15.8	T	82.5	0	20*	7*	1	0	0	11	0.0	71.4	25.0	28.6	T	71.4
297	1	47*	9	3	0	0	6	1.7	78.3	15.0	20.0	T	78.3	0	29*	7	1	0	0	2	0.0	78.4	18.9	21.6	T	78.4
298	0	49*	7	3	0	1	11	0.0	83.1	11.9	16.9	T	83.1	0	28*	5	1	0	0	5	0.0	82.4	14.7	17.6	T	82.4
299	1	49*	6	3	0	1	10	1.7	83.1	10.2	15.3	T	83.1	0	26*	7*	2	0	0	4	0.0	74.3	20.0	25.7	T	74.3
300	0	47*	8	4	0	1	20	0.0	79.7	13.6	20.3	T	79.7	0	20*	4	1	0	0	14	0.0	80.0	16.0	20.0	T	80.0
301	3	23*	28*	5	0	1	1	5.1	39.0	47.5	55.9	S	47.5	3	22*	7*	2	0	1	4	8.8	64.7	20.6	26.5	T	64.7
302	1	38*	13*	6	0	2	19	1.7	65.5	22.4	32.8	T	65.5	0	28*	4	1	0	0	6	0.0	84.8	12.1	15.2	T	84.8
303	0	39*	15*	5	0	1	15	0.0	66.1	25.4	33.9	T	66.1	0	27*	8*	1	0	0	3	0.0	75.0	22.2	25.0	T	75.0
304	1	26*	21*	5	0	7	20	1.9	49.1	39.6	49.1	T	49.1	2	21*	7*	1	0	0	8	6.5	67.7	22.6	25.8	T	67.7
305	6	33*	17*	4	0	0	3	10.0	55.0	28.3	35.0	T	55.0	3	25*	8*	3	0	0	0	7.7	64.1	20.5	28.2	T	64.1
306	3	33*	20*	4	0	0	4	5.0	55.0	33.3	40.0	T	55.0	2	22*	10*	5	0	0	0	5.1	56.4	25.6	38.5	T	56.4
307	3	30*	19*	5	0	3	12	5.3	52.6	33.3	42.1	T	52.6	2	19*	7*	3	0	0	8	6.5	61.3	22.6	32.3	T	61.3
308	3	32*	21*	4	0	0	4	5.0	53.3	35.0	41.7	T	53.3	4	26*	7	2	0	0	0	10.3	66.7	17.9	23.1	T	66.7
309	1	22*	30*	6	0	1	4	1.7	37.3	50.8	61.0	S	50.8	3	13*	17*	5	0	0	1	7.9	34.2	44.7	57.9	S	44.7
310	0	47*	6	3	1	3	25	0.0	82.5	10.5	15.8	T	82.5	0	17*	3	1	0	0	18	0.0	81.0	14.3	19.0	T	81.0

	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
TASK	P	I	S	E	O	N	NO	P	I	S	S+E	MO	%	P	I	S	E	O	N	NO	P	I	S	S+E	MO	%
311	2	36*	17*	4	0	1	7	3.4	61.0	28.8	35.6	I	61.0	0	31*	7	1	0	0	0	0.0	79.5	17.9	20.5	I	79.5
312	0	47*	8	4	1	0	11	0.0	78.3	13.3	20.0	I	78.3	0	31*	7	1	0	0	5	0.0	91.2	5.9	8.8	I	91.2
313	0	48*	9	3	0	0	9	0.0	80.0	15.0	20.0	I	80.0	0	29*	4	1	0	0	5	0.0	85.3	11.8	14.7	I	85.3
314	1	34*	18*	3	1	3	21	1.8	59.6	31.6	36.8	I	59.6	0	18*	7*	1	0	0	13	0.0	69.2	26.9	30.8	I	69.2
315	0	35*	20*	4	0	1	9	0.0	59.3	33.9	40.7	I	59.3	0	26*	9*	1	0	0	3	0.0	72.2	25.0	27.8	I	72.2
316	1	34*	21*	3	0	0	4	1.7	57.6	35.6	40.7	I	57.6	0	24*	12*	3	0	0	0	0.0	61.5	30.8	38.5	I	61.5
317	1	34*	15*	6	0	3	17	1.8	60.7	26.8	37.5	I	60.7	0	15*	10*	1	0	0	13	0.0	57.7	38.5	42.3	I	57.7
318	0	40*	17*	2	0	1	15	0.0	67.8	28.8	32.2	I	67.8	0	17*	6*	3	0	0	13	0.0	65.4	23.1	34.6	I	65.4
319	0	44*	7	5	1	3	24	0.0	77.2	12.3	21.1	I	77.2	0	16*	4	1	0	0	18	0.0	76.2	19.0	23.8	I	76.2
320	0	46*	11	2	1	0	7	0.0	76.7	18.3	21.7	I	76.7	0	32*	6	1	0	0	0	0.0	82.1	15.4	17.9	I	82.1
321	0	43*	13*	4	0	0	5	0.0	71.7	21.7	28.3	I	71.7	0	33*	4	1	0	0	1	0.0	86.8	10.5	13.2	I	86.8
322	0	46*	13*	1	0	0	8	0.0	76.7	21.7	23.3	I	76.7	0	31*	5	1	0	0	2	0.0	83.8	13.5	16.2	I	83.8
323	0	47*	11	2	0	0	10	0.0	78.3	18.3	21.7	I	78.3	0	30*	6	1	0	0	2	0.0	81.1	16.2	18.9	I	81.1
324	0	32*	20*	7	0	1	6	0.0	54.2	33.9	45.8	I	54.2	0	27*	10*	2	0	0	0	0.0	69.2	25.6	30.8	I	69.2
325	0	47*	12*	1	0	0	9	0.0	78.3	20.0	21.7	I	78.3	0	24*	8*	1	0	0	6	0.0	72.7	24.2	27.3	I	72.7
326	1	39*	18*	2	0	0	6	1.7	65.0	30.0	33.3	I	65.0	0	32*	6	1	0	0	0	0.0	82.1	15.4	17.9	I	82.1
327	1	25*	29*	5	0	[illegible]	5	1.7	41.7	48.3	56.7	S	48.3	0	23*	11*	4	0	1	0	0.0	60.5	28.9	39.5	I	60.5
328	2	32*	23*	3	0	0	5	3.3	53.3	38.3	43.3	I	53.3	0	27*	10*	1	0	0	0	0.0	71.1	26.3	28.9	I	71.1
329	1	27*	28*	4	0	0	6	1.7	45.0	46.7	53.3	S	46.7	0	22*	16*	1	0	0	0	0.0	56.4	41.0	43.6	I	56.4
330	0	30*	23*	4	0	3	15	0.0	52.6	40.4	47.4	I	52.6	0	21*	8*	1	0	0	9	0.0	70.0	26.7	30.0	I	70.0
331	0	43*	12*	4	1	0	15	0.0	71.7	20.0	26.7	I	71.7	0	23*	7*	1	0	0	8	0.0	74.2	22.6	25.8	I	74.2
332	2	33*	21*	4	0	0	5	3.3	55.0	35.0	41.7	I	55.0	0	24*	13*	2	0	0	0	0.0	61.5	33.3	38.5	I	61.5
333	2	38*	16*	4	0	0	9	3.3	63.3	26.7	33.3	I	63.3	2	26*	7	2	0	0	2	5.4	70.3	18.9	24.3	I	70.3
334	0	47*	9	3	0	1	14	0.0	79.7	15.3	20.3	I	79.7	0	29*	5	1	0	0	4	0.0	82.9	14.3	17.1	I	82.9
335	1	44*	9	4	0	2	26	1.7	75.9	15.5	22.4	I	75.9	0	17*	8*	1	0	0	13	0.0	65.4	30.8	34.6	I	65.4
336	1	38*	14*	7	0	0	14	1.7	63.3	23.3	35.0	I	63.3	0	20*	8*	1	0	0	10	0.0	69.0	27.6	31.0	I	69.0
337	1	32*	23*	4	0	0	5	1.7	53.3	38.3	45.0	I	53.3	0	25*	12*	2	0	0	0	0.0	64.1	30.8	35.9	I	64.1
338	0	45*	12*	2	0	0	7	0.0	76.3	20.3	23.7	I	76.3	0	30*	5	1	0	0	2	0.0	83.3	13.9	16.7	I	83.3
339	3	23*	26*	4	1	3	8	5.3	40.4	45.6	52.6	S	45.6	4	18*	12*	2	0	2	1	11.1	50.0	33.3	38.9	I	50.0
340	4	22*	27*	4	0	3	9	7.0	38.6	47.4	54.4	S	47.4	4	13*	16*	2	0	3	1	11.4	37.1	45.7	51.4	S	45.7
341	1	31*	24*	4	0	0	3	1.7	51.7	40.0	46.7	I	51.7	1	19*	16*	2	0	0	1	2.6	50.0	42.1	47.4	I	50.0
342	0	42*	11	6	0	1	14	0.0	71.2	18.6	28.8	I	71.2	0	26*	6	1	0	0	6	0.0	78.8	18.2	21.2	I	78.8
343	0	40*	14*	6	0	0	10	0.0	66.7	23.3	33.3	I	66.7	0	27*	8*	1	0	0	3	0.0	75.0	22.2	25.0	I	75.0
344	0	39*	16*	3	0	1	10	0.0	67.2	27.6	32.8	I	67.2	1	25*	10*	1	0	0	2	2.7	67.6	27.0	29.7	I	67.6
345	3	27*	24*	5	0	1	5	5.1	45.8	40.7	49.2	I	45.8	2	18*	15*	2	0	1	1	5.4	48.6	40.5	45.9	I	48.6

TASK	WORKER DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE		SUPERVISOR DISTRIBUTION OF SUGGESTED LEARNING SOURCES							PERCENTAGES				MODE	
	P	I	S	E	O	N	IQ6 NO	P	I	S	S+E	MO	%	P	I	S	E	O	N	IQ2 NO	P	I	S	S+E	MO	%
346	0	37*	19*	4	0	0	8	0.0	61.7	31.7	38.3	I	61.7	1	27*	8*	1	0	0	2	2.7	73.0	21.6	24.3	I	73.0
347	3	23*	24*	9	0	1	3	5.1	39.0	40.7	55.9	S	40.7	4	16*	16*	2	0	1	0	10.5	42.1	42.1	47.4	IS	42.1
348	1	49*	6	2	0	2	22	1.7	84.5	10.3	13.8	I	84.5	0	27*	6	1	0	0	5	0.0	79.4	17.6	20.6	I	79.4
349	0	50*	3	4	0	2	22	0.0	87.7	5.3	12.3	I	87.7	0	28*	5	1	0	0	5	0.0	82.4	14.7	17.6	I	82.4
350	0	43*	10	5	0	2	28	0.0	74.1	17.2	25.9	I	74.1	1	21*	8*	0	0	0	9	3.3	70.0	26.7	26.7	I	70.0
351	0	51*	4	3	0	2	22	0.0	87.9	6.9	12.1	I	87.9	0	26*	7*	1	0	0	5	0.0	76.5	20.6	23.5	I	76.5
352	0	50*	5	3	0	2	22	0.0	86.2	8.6	13.8	I	86.2	0	27*	5	1	0	0	5	0.0	79.4	17.6	20.6	I	79.4
353	1	48*	5	4	0	2	24	1.7	82.8	8.6	15.5	I	82.8	0	26*	5	1	0	0	7	0.0	81.3	15.6	18.8	I	81.3
354	0	42*	9	4	0	4	31	0.0	76.4	16.4	23.6	I	76.4	0	24*	5	1	0	0	9	0.0	80.0	16.7	20.0	I	80.0
355	0	46*	8	4	0	2	25	0.0	79.3	13.8	20.7	I	79.3	0	25*	6	1	0	0	7	0.0	78.1	18.8	21.9	I	78.1
356	0	39*	12*	7	0	2	24	0.0	67.2	20.7	32.8	I	67.2	0	24*	9*	1	0	0	5	0.0	70.6	26.5	29.4	I	70.6
357	1	33*	19*	5	0	2	19	1.7	56.9	32.8	41.4	I	56.9	0	22*	11*	1	0	0	5	0.0	64.7	32.4	35.3	I	64.7
358	0	41*	11	6	0	2	23	0.0	70.7	19.0	29.3	I	70.7	0	24*	8*	1	0	0	6	0.0	72.7	24.2	27.3	I	72.7
359	0	39*	12*	7	0	2	23	0.0	67.2	20.7	32.8	I	67.2	0	24*	8*	1	0	0	6	0.0	72.7	24.2	27.3	I	72.7
360	0	42*	11	5	0	2	24	0.0	72.4	19.0	27.6	I	72.4	0	26*	7*	1	0	0	5	0.0	76.5	20.6	23.5	I	76.5
361	0	44*	8	5	1	2	24	0.0	75.9	13.8	22.4	I	75.9	0	24*	7*	1	0	0	7	0.0	75.0	21.9	25.0	I	75.0
362	1	37*	19*	5	0	2	16	1.7	56.9	32.8	41.4	I	56.9	1	20*	9*	1	0	0	8	3.2	64.5	29.0	32.3	I	64.5
363	1	38*	16*	4	0	1	6	1.7	64.4	27.1	33.9	I	64.4	0	23*	8*	5	0	1	2	0.0	63.9	22.2	36.1	I	63.9
364	3	26*	25*	6	0	0	6	5.0	43.3	41.7	51.7	I	43.3	3	17*	14*	2	0	1	2	8.3	47.2	38.9	44.4	I	47.2
365	2	23*	29*	4	0	2	7	3.4	39.7	50.0	56.9	S	50.0	3	14*	17*	2	0	0	3	8.3	38.9	47.2	52.8	S	47.2
366	1	29*	23*	5	0	1	7	1.7	50.0	39.7	48.3	I	50.0	2	18*	14*	2	0	0	3	5.6	50.0	38.9	44.4	I	50.0
367	1	30*	24*	4	0	1	10	1.7	50.8	40.7	47.5	I	50.8	2	21*	11*	2	0	0	3	5.6	58.3	30.6	36.1	I	58.3
368	0	29*	27*	4	0	0	6	0.0	48.3	45.0	51.7	I	48.3	1	20*	13*	2	0	0	3	2.8	55.6	36.1	41.7	I	55.6
369	1	28*	24*	5	0	2	21	1.7	48.3	41.4	50.0	I	48.3	1	17*	12*	1	0	0	8	3.2	54.8	38.7	41.9	I	54.8
370	0	36*	17*	4	0	3	33	0.0	63.2	29.8	36.8	I	63.2	1	7*	4*	1	0	0	26	7.7	53.8	30.8	38.5	I	53.8
371	14*	16*	22*	5	0	3	9	24.6	28.1	38.6	47.4	S	38.6	7*	11*	13*	4	0	3	1	20.0	31.4	37.1	48.6	S	37.1
372	12*	10*	20*	8	0	10	28	24.0	20.0	40.0	56.0	S	40.0	1	6*	10*	1	0	3	18	5.6	33.3	55.6	61.1	S	55.6
373	8	20*	23*	6	1	2	11	13.8	34.5	39.7	50.0	S	39.7	4	10*	14*	6	0	2	3	11.8	29.4	41.2	58.8	S	41.2
374	10	15*	25*	6	0	4	13	17.9	26.8	44.6	55.4	S	44.6	5	12*	10*	3	0	1	7	16.7	40.0	33.3	43.3	I	40.0
375	3	14*	30*	9	0	4	12	5.4	25.0	53.6	69.6	S	53.6	2	6*	16*	5	0	1	8	6.9	20.7	55.2	72.4	S	55.2
376	3	14*	27*	10	0	6	16	5.6	25.9	50.0	68.5	S	50.0	2	5*	13*	4	0	1	13	8.3	20.8	54.2	70.8	S	54.2
377	12*	10	26*	9	0	3	18	21.1	17.5	45.6	61.4	S	45.6	2	9*	13*	5	0	2	8	5.9	31.0	44.8	62.1	S	44.8
378	3	13*	27*	8	1	8	36	5.8	25.0	51.9	67.3	S	51.9	1	6*	12*	4	0	1	15	4.3	26.1	52.2	69.6	S	52.2
379	3	11*	28*	7	0	11	43	6.1	22.4	57.1	71.4	S	57.1	1	5*	10*	2	0	1	19	5.6	27.8	55.6	66.7	S	55.6
380	5	26*	20*	6	0	2	13	8.8	45.6	35.1	45.6	I	45.6	3	16*	14*	3	0	1	2	8.3	44.4	38.9	47.2	I	44.4

TT: 588

10964

4436
126
1
757
1940
7814
2528
44
1942
6410

174

Table C-7

Supervisor Suggestions (Q10 and Q11)[a]

Question 10: Possible [redacted]mprove Procedures (Supervisors)

(Part 1) Based on your total experience as a supervisor of Automotive Mechanics do you feel that for some of their work activities there could be a better or more effective way of doing the activity? That is, of the activities you checked (in Question 2), could an improvement be made on the present way in which Automotive Mechanics typically perform an activity?

Response: Check mark for each task where procedures could be improved.

(Part 2) For those activities checked as possible to improve procedures, suggest the main way for improving such procedures.

Categories of the Response Scale:

a. Provide a readable, ready-reference handbook or similar guide for use on the job (H).
b. Expand, correct, or clarify the existing directives on the matter (D).
c. Improve the content of formal school training on the matter (T).
d. Provide research or special study for improving the present procedures (R).
e. I don't know how it might be improved but I think it can (?).
f. Other (comments to be written in) (O).

Question 11: Poorly Performed Task (Supervisors)

(Part 1) Based on your total experience as a supervisor of Automotive Mechanics do you feel that many Automotive Mechanics perform certain of their activities poorly or unsatisfactorily, even after a reasonable amount of time on the job? That is, of the activities checked (in Question 2), which ones are usually not done by experienced Automotive Mechanics as well as they could be? This is not a rating of individual mechanics, but rather an indication of activities which could be improved under the right circumstances.

Response: Check mark for each task where performance is generally unsatisfactory.

[a]Responses were summarized only for tasks each supervisor checked on Q2.

(Part 2) For those activities checked as poorly performed, suggest the main reason for such performance.

Categories of the Response Scale:

a. Lack of interest or poor attitude on the part of Automotive Mechanics (I).
b. Ineffective job training on the matter, in formal school training programs (T).
c. Automotive Mechanics are overburdened with more important matters and do not have time to perform this activity properly (M).
d. The activity is an extremely difficult one to master (D).
e. I don't know the reason but I believe the general performance by many Automotive Mechanics is poor or unsatisfactory (?).
f. Other (comments to be written in) (O).

Each of the 22 columns of Table C-7 is identified below.

Column 113: Number of Group 1 supervisors indicating that an improvement is possible in the way of performing the task.

Column 114: Percent of Group 1 supervisors checking the task (Question 10).

Note: Asterisks (*) appear next to percentages in Column 114 when that percentage represents 10% or more of all supervisors included in Group 1.

Columns 115 through 120: Number of Group 1 supervisors using each category to suggest a way of improving task procedures.

Column 121: Percent of suggestions that cited training content (T) as the main way by which task procedures could be improved.

Column 122: Most common suggestion (mode) given by Group 1 supervisors. As in Table C-6, occasionally more than one suggestion category tied for most common use. The table displays up to two modal categories. More than two modal categories for a task are coded on Table C-7 as "MM", an abbreviation for "multiple modes."

Column 123: Percent of suggestions that cited the modal category (Column 122) as the main way by which task procedures could be improved.

Columns 124 through 134: Same as Columns 113 through 123 but for indications and suggested reasons on Question 11, using Group 2 supervisors. Column 132 pertains to "ineffective job training," not necessarily "training content" as in Question 10 and Column 121.

TASK INVENTORY DATA SUMMARY
AUTO MECHANICS -- COMPOSITE

TABLE 7: (Q10 & 11) SUPERVISOR SUGGESTIONS

TASK	POSSIBLE TO IMPROVE		DISTRIBUTION OF MEANS FOR IMPROVEMENT							MODE		POORLY PERFORMED		DISTRIBUTION OF REASONS FOR POOR PERFORMANCE							MODE	
	N	%	H	D	T	R	?	O	%T	MO	%	N	%	I	T	M	D	?	O	%T	MO	%
1	2	7.1	2	0	0	0	0	0	0.0	H	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
2	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
3	14	50.0*	4	1	4	4	0	0	30.8	MM	0.0	8	23.5*	2	4	0	2	0	0	50.0	T	50.0
4	7	25.0*	4	1	2	0	0	0	28.6	H	57.1	3	8.8	2	1	0	0	0	0	33.3	I	66.7
5	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
6	4	14.3*	0	2	1	0	1	0	25.0	D	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
7	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
8	1	3.6	0	1	0	0	0	0	0.0	D	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
9	4	14.3*	0	2	1	0	1	0	25.0	D	50.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
10	7	25.0*	3	2	1	0	1	0	14.3	H	42.9	2	5.9	2	0	0	0	0	0	0.0	I	100.0
11	1	3.6	0	1	0	0	0	0	0.0	D	100.0	3	8.8	1	1	1	0	0	0	33.3	MM	0.0
12	2	7.1	0	0	0	1	1	0	0.0	R?	50.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
13	1	3.6	0	0	1	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
14	15	53.6*	6	6	0	1	0	1	0.0	HD	42.9	4	11.8*	3	1	0	0	0	0	25.0	I	75.0
15	1	3.6	1	0	0	0	0	0	0.0	H	100.0	8	23.5*	7	1	0	0	0	0	12.5	I	87.5
16	2	7.1	1	0	0	1	0	0	0.0	HR	50.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
17	1	3.6	0	1	0	0	0	0	0.0	D	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
18	6	21.4*	1	2	2	1	0	0	33.3	DT	33.3	4	11.8*	2	1	1	0	0	0	25.0	I	50.0
19	3	10.7*	1	0	0	2	0	0	0.0	R	66.7	1	2.9	0	0	1	0	0	0	0.0	M	100.0
20	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
21	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
22	1	3.6	0	1	0	0	0	0	0.0	D	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
23	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
24	2	7.1	1	0	0	1	0	0	0.0	HR	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
25	2	7.1	0	1	0	1	0	0	0.0	DR	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
26	1	3.6	0	0	0	1	0	0	0.0	R	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
27	3	10.7*	0	1	2	0	0	0	66.7	T	66.7	5	14.7*	3	2	0	0	0	0	40.0	I	60.0
28	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
29	6	21.4*	0	1	2	1	2	0	33.3	T?	33.3	0	0.0	0	0	0	0	0	0	0.0		0.0
30	1	3.6	0	0	0	0	1	0	0.0	?	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0

TASK	POSSIBLE TO IMPROVE N	POSSIBLE TO IMPROVE %	DISTRIBUTION OF MEANS FOR IMPROVEMENT H	D	T	R	?	O	%T	MODE MO	MODE %	POORLY PERFORMED N	POORLY PERFORMED %	DISTRIBUTION OF REASONS FOR POOR PERFORMANCE I	T	M	D	?	O	%T	MODE MO	MODE %
31	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
32	2	7.1	2	0	0	0	0	0	0.0	H	100.0	2	5.9	1	0	1	0	0	0	0.0	IM	50.0
33	2	7.1	0	0	0	0	1	1	0.0	?O	50.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
34	2	7.1	0	1	1	0	0	0	50.0	DT	50.0	3	8.8	1	0	2	0	0	0	0.0	M	66.7
35	0	0.0	0	0	0	0	0	0	0.0		0.0	2	5.9	0	0	2	0	0	0	0.0	M	100.0
36	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
37	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
38	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
39	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
40	3	10.7*	0	2	0	0	1	0	0.0	D	66.7	2	5.9	0	1	1	0	0	0	50.0	TM	50.0
41	1	3.6	0	1	0	0	0	0	0.0	D	100.0	2	5.9	1	0	1	0	0	0	0.0	IM	50.0
42	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
43	1	3.6	1	0	0	0	0	0	0.0	H	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
44	9	32.1*	2	0	5	1	0	1	55.6	T	55.6	6	17.6*	0	3	0	2	0	1	50.0	T	50.0
45	1	3.6	0	0	0	0	1	0	0.0	?	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
46	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
47	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
48	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
49	1	3.6	0	0	1	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
50	1	3.6	0	0	1	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
51	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
52	15	53.6*	2	1	8	4	0	0	53.3	T	53.3	14	41.2*	0	6	0	8	0	0	42.9	D	57.1
53	1	3.6	1	0	0	0	0	0	0.0	H	100.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
54	7	25.0*	0	0	6	0	1	0	85.7	T	85.7	6	17.6*	0	2	3	1	0	0	33.3	M	50.0
55	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
56	3	10.7*	0	1	2	0	0	0	66.7	T	66.7	7	20.6*	1	0	3	2	0	0	0.0	M	50.0
57	6	21.4*	2	0	4	0	0	0	66.7	T	66.7	3	8.8	0	0	1	2	0	0	0.0	D	66.7
58	1	3.6	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
59	1	3.6	0	0	1	0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
60	0	0.0	0	0	0	0	0	0	0.0		0.0	2	5.9	0	0	0	0	1	0	0.0	?	100.0
61	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
62	2	7.1	0	1	0	0	1	0	0.0	D?	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
63	1	3.6	0	1	0	0	0	0	0.0	D	100.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
64	1	3.6	0	1	0	0	0	0	0.0	D	100.0	4	11.8*	4	0	0	0	0	0	0.0	I	100.0
65	2	7.1	0	2	0	0	0	0	0.0	D	100.0	3	8.8	2	0	1	0	0	0	0.0	I	66.7

TASK	POSSIBLE TO IMPROVE		DISTRIBUTION OF MEANS FOR IMPROVEMENT							MODE		POORLY PERFORMED		DISTRIBUTION OF REASONS FOR POOR PERFORMANCE							MODE	
	N	%	H	D	I	R	?	O	%T	MO	%	N	%	I	T	M	D	?	O	%T	MO	%
66	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
67	2	7.1	1	0	1	0	0	0	50.0	HT	50.0	3	8.8	2	0	1	0	0	0	0.0	I	66.7
68	2	7.1	0	1	1	0	0	0	50.0	DT	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
69	1	3.6	0	1	0	0	0	0	0.0	D	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
70	1	3.6	0	1	0	0	0	0	0.0	D	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
71	1	3.6	1	0	0	0	0	0	0.0	M	100.0	2	5.9	2	0	0	0	0	0	0.0	I	100.0
72	3	10.7*	1	1	1	0	0	0	33.3	MM	0.0	4	11.8*	3	0	1	0	0	0	0.0	I	75.0
73	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
74	1	3.6	0	1	0	0	0	0	0.0	D	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
75	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
76	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
77	1	3.6	1	0	0	0	0	0	0.0	M	100.0	2	5.9	0	0	1	1	0	0	0.0	MD	50.0
78	4	14.3*	4	0	0	0	0	0	0.0	M	100.0	2	5.9	0	0	2	0	0	0	0.0	M	100.0
79	1	3.6	1	0	0	0	0	0	0.0	M	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
80	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
81	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
82	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
83	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
84	0	0.0	0	0	0	0	0	0	0.0		0.0	2	5.9	2	0	0	0	0	0	0.0	I	100.0
85	1	3.6	0	0	0	0	0	1	0.0	O	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
86	2	7.1	1	1	0	0	0	0	0.0	MO	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
87	1	3.6	0	0	0	0	0	1	0.0	O	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
88	1	3.6	0	0	0	0	1	0	0.0	?	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
89	2	7.1	0	0	1	0	1	0	50.0	T?	50.0	2	5.9	0	1	0	1	0	0	50.0	TD	50.0
90	1	3.6	1	0	0	0	0	0	0.0	M	100.0	5	14.7*	2	1	2	0	0	0	20.0	IM	40.0
91	3	10.7*	0	0	2	0	0	1	66.7	T	66.7	3	8.8	1	1	1	0	0	0	33.3	MM	0.0
92	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
93	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
94	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
95	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
96	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	4	11.8*	2	0	0	4	0	0	0.0	D	100.0
97	3	10.7*	0	1	1	1	0	0	33.3	MM	0.0	4	11.8*	2	1	0	0	1	0	25.0	I	50.0
98	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
99	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
100	1	3.6	0	0	0	0	0	1	0.0	O	100.0	4	11.8*	1	0	2	0	1	0	0.0	M	50.0

TASK	POSSIBLE TO IMPROVE		DISTRIBUTION OF MEANS FOR IMPROVEMENT							MODE		POORLY PERFORMED		DISTRIBUTION OF REASONS FOR POOR PERFORMANCE							MODE	
	N	%	H	D	T	R	?	O	%T	MO	%	N	%	I	T	M	D	?	O	%T	MO	%
101	1	3.6	0	1	0	0	0	0	0.0	D	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
102	2	7.1	0	1	0	0	1	0	0.0	D?	50.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
103	1	3.6	1	0	0	0	0	0	0.0	M	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
104	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
105	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
106	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
107	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
108	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
109	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
110	2	7.1	0	1	1	0	0	0	50.0	DT	50.0	6	17.6*	2	1	3	0	0	0	16.7	M	50.0
111	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
112	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
113	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
114	0	0.0	0	0	0	0	0	0	0.0		0.0	3	8.8	1	0	2	0	0	0	0.0	M	66.7
115	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
116	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
117	6	21.4*	1	0	5	0	0	0	83.3	T	83.3	2	5.9	1	1	0	0	0	0	50.0	IT	50.0
118	4	14.3*	0	1	2	1	0	0	50.0	T	50.0	4	11.8*	3	0	1	0	0	0	0.0	I	75.0
119	6	21.4*	0	1	5	0	0	0	83.3	T	83.3	5	14.7*	3	0	1	1	0	0	0.0	I	60.0
120	7	25.0*	0	0	6	1	0	0	85.7	T	85.7	7	20.6*	0	2	0	5	0	0	28.6	D	71.4
121	6	21.4*	1	1	4	0	0	0	66.7	T	66.7	1	2.9	0	1	0	0	0	0	100.0	T	100.0
122	6	21.4*	1	0	5	0	0	0	83.3	T	83.3	2	5.9	0	0	0	2	0	0	0.0	D	100.0
123	8	28.6*	2	0	6	0	0	0	75.0	T	75.0	3	8.8	0	3	0	0	0	0	100.0	T	100.0
124	8	28.6*	0	0	7	1	0	0	87.5	T	87.5	2	5.9	1	0	1	0	0	0	0.0	IM	50.0
125	5	17.9*	0	0	5	0	0	0	100.0	T	100.0	2	5.9	1	0	1	0	0	0	0.0	IM	50.0
126	6	21.4*	0	0	5	1	0	0	83.3	T	83.3	2	5.9	0	2	0	0	0	0	100.0	T	100.0
127	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
128	7	25.0*	0	0	6	1	0	0	85.7	T	85.7	7	20.6*	0	3	0	4	0	0	42.9	D	57.1
129	4	14.3*	0	1	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
130	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
131	4	14.3*	0	1	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
132	6	21.4*	2	0	4	0	0	0	66.7	T	66.7	4	11.8*	1	3	0	0	0	0	75.0	T	75.0
133	5	17.9*	1	0	3	1	0	0	60.0	T	60.0	2	5.9	0	0	2	0	0	0	0.0	M	100.0
134	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
135	1	3.6	0	0	1	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0

TASK	POSSIBLE TO IMPROVE N	POSSIBLE TO IMPROVE %	DISTRIBUTION OF MEANS FOR IMPROVEMENT H	D	T	R	?	0	%I	MODE MO	MODE %	POORLY PERFORMED N	POORLY PERFORMED %	DISTRIBUTION OF REASONS FOR POOR PERFORMANCE I	T	M	D	?	0	%T	MODE MO	MODE %
136	1	3.6	1	0	0	0	0	0	0.0	H	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
137	1	3.6	0	0	1	0	0	0	100.0	T	100.0	2	5.9	1	1	0	0	0	0	50.0	IT	50.0
138	5	17.9*	0	0	4	1	0	0	80.0	T	80.0	3	8.8	0	3	0	0	0	0	100.0	T	100.0
139	5	17.9*	0	0	4	1	0	0	80.0	T	80.0	3	8.8	0	2	0	1	0	0	66.7	T	66.7
140	1	3.6	0	0	1	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
141	2	7.1	1	0	1	0	0	0	50.0	HT	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
142	2	7.1	1	0	1	0	0	0	50.0	HT	50.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
143	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	2	5.9	0	2	0	0	0	0	100.0	T	100.0
144	6	21.4*	1	0	5	0	0	0	83.3	T	83.3	1	2.9	1	0	0	0	0	0	0.0	I	100.0
145	2	7.1	1	0	1	0	0	0	50.0	HT	50.0	2	5.9	0	0	2	0	0	0	0.0	M	100.0
146	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
147	2	7.1	1	0	1	0	0	0	50.0	HT	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
148	6	21.4*	0	0	5	1	0	0	83.3	T	83.3	1	2.9	0	1	0	0	0	0	100.0	T	100.0
149	6	21.4*	0	0	5	1	0	0	83.3	T	83.3	3	8.8	0	3	0	0	0	0	100.0	T	100.0
150	2	7.1	1	0	1	0	0	0	50.0	HT	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
151	6	21.4*	0	0	5	1	0	0	83.3	T	83.3	1	2.9	0	0	0	1	0	0	0.0	D	100.0
152	6	21.4*	0	1	5	0	0	0	83.3	T	83.3	2	5.9	0	2	0	0	0	0	100.0	T	100.0
153	6	21.4*	0	0	5	1	0	0	83.3	T	83.3	5	14.7*	1	4	0	0	0	0	80.0	T	80.0
154	4	14.3*	0	0	4	0	0	0	100.0	T	100.0	2	5.9	1	0	0	1	0	0	0.0	ID	50.0
155	6	21.4*	1	1	4	0	0	0	66.7	T	66.7	5	14.7*	2	2	1	0	0	0	40.0	IT	40.0
156	5	17.9*	1	0	4	0	0	0	80.0	T	80.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
157	6	21.4*	0	0	5	1	0	0	83.3	T	83.3	2	5.9	1	1	0	0	0	0	50.0	IT	50.0
158	5	17.9*	0	0	4	1	0	0	80.0	T	80.0	0	0.0	0	0	0	0	0	0	0.0		0.0
159	5	17.9*	0	0	4	1	0	0	80.0	T	80.0	2	5.9	1	0	0	1	0	0	0.0	ID	50.0
160	6	21.4*	1	0	5	0	0	0	83.3	T	83.3	0	0.0	0	0	0	0	0	0	0.0		0.0
161	2	7.1	0	0	1	1	0	0	50.0	TR	50.0	3	8.8	0	1	0	2	0	0	33.3	D	66.7
162	6	21.4*	2	1	3	0	0	0	50.0	T	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
163	5	17.9*	1	0	4	0	0	0	80.0	T	80.0	2	5.9	1	0	1	0	0	0	0.0	IM	50.0
164	4	14.3*	0	1	2	1	0	0	50.0	T	50.0	3	8.8	0	0	0	3	0	0	0.0	D	100.0
165	1	3.6	0	0	0	1	0	0	0.0	R	100.0	3	8.8	0	0	0	3	0	0	0.0	D	100.0
166	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	1	2.9	0	0	1	0	0	0	0.0	M	100.0
167	4	14.3*	0	1	2	1	0	0	50.0	T	50.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
168	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
169	2	7.1	1	0	1	0	0	0	50.0	HT	50.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
170	2	7.1	1	0	1	0	0	0	50.0	HT	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0

TASK	POSSIBLE TO IMPROVE N	POSSIBLE TO IMPROVE %	DISTRIBUTION OF MEANS FOR IMPROVEMENT M	D	T	R	?	O	%T	MODE MO	MODE %	POORLY PERFORMED N	POORLY PERFORMED %	DISTRIBUTION OF REASONS FOR POOR PERFORMANCE I	T	M	D	?	O	%T	MODE MO	MODE %
171	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	2	5.9	0	0	0	2	0	0	0.0	D	100.0
172	4	14.3*	0	1	2	1	0	0	50.0	T	50.0	2	5.9	0	0	0	2	0	0	0.0	D	100.0
173	6	21.4*	0	0	5	1	0	0	83.3	T	83.3	0	0.0	0	0	0	0	0	0	0.0		0.0
174	3	10.7*	0	0	2	1	0	0	66.7	T	66.7	1	2.9	0	1	0	0	0	0	100.0	T	100.0
175	9	32.1*	1	0	7	1	0	0	77.8	T	77.8	2	5.9	0	1	0	1	0	0	50.0	TD	50.0
176	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
177	8	28.6*	1	0	6	1	0	0	75.0	T	75.0	8	23.5*	0	2	0	6	0	0	25.0	D	75.0
178	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	3	8.8	0	2	0	1	0	0	66.7	T	66.7
179	2	7.1	0	0	1	1	0	0	50.0	TR	50.0	2	5.9	2	0	0	0	0	0	0.0	I	100.0
180	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
181	5	17.9*	1	0	4	0	0	0	80.0	T	80.0	0	0.0	0	0	0	0	0	0	0.0		0.0
182	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
183	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
184	4	14.3*	0	0	4	0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
185	3	10.7*	0	0		0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
186	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
187	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
188	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
189	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
190	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
191	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	4	11.8*	0	1	1	2	0	0	25.0	D	50.0
192	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
193	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
194	3	10.7*	1	0	1	0	1	0	33.3	MM	0.0	2	5.9	0	2	0	0	0	0	100.0	T	100.0
195	4	14.3*	0	0	3	0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
196	6	21.4*	1	0	4	0	0	0	80.0	T	80.0	4	11.8*	2	0	2	0	0	0	0.0	IM	50.0
197	4	14.3*	0	1	3	0	0	0	75.0	T	75.0	4	11.8*	1	3	0	0	0	0	75.0	T	75.0
198	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	2	5.9	2	0	0	0	0	0	0.0	I	100.0
199	6	21.4*	1	1	3	1	0	0	50.0	T	50.0	3	8.8	0	1	0	2	0	0	33.3	D	66.7
200	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
201	2	7.1	0	0	1	1	0	0	50.0	TR	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
202	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	2	5.9	1	0	0	1	0	0	0.0	ID	50.0
203	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
204	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
205	6	21.4*	0	0	4	2	0	0	66.7	T	66.7	2	5.9	0	0	0	2	0	0	0.0	D	100.0

TASK	POSSIBLE TO IMPROVE N	POSSIBLE TO IMPROVE %	DISTRIBUTION OF MEANS FOR IMPROVEMENT H	D	T	R	?	O	%T	MODE MO	MODE %	POORLY PERFORMED N	POORLY PERFORMED %	DISTRIBUTION OF REASONS FOR POOR PERFORMANCE I	T	M	D	?	O	%T	MODE MO	MODE %
206	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	4	11.8*	0	3	0	1	0	0	75.0	T	75.0
207	3	10.7*	0	0	2	1	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
208	3	10.7*	0	0	2	1	0	0	66.7	T	66.7	1	2.9	1	0	0	0	0	0	0.0	I	100.0
209	3	10.7*	0	0	2	1	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
210	6	21.4*	0	0	5	1	0	0	83.3	T	83.3	1	2.9	1	0	0	0	0	0	0.0	I	100.0
211	3	10.7*	0	0	2	1	0	0	66.7	T	66.7	1	2.9	1	0	0	0	0	0	0.0	I	100.0
212	5	17.9*	1	0	4	0	0	0	80.0	T	80.0	2	5.9	0	0	2	0	0	0	0.0	M	100.0
213	5	17.9*	1	0	4	0	0	0	80.0	T	80.0	0	0.0	0	0	0	0	0	0	0.0		0.0
214	6	21.4*	0	0	5	1	0	0	83.3	T	83.3	7	20.6*	1	4	0	1	0	0	66.7	T	66.7
215	10	35.7*	0	0	9	1	0	0	90.0	T	90.0	7	20.6*	2	0	0	5	0	0	0.0	D	71.4
216	8	28.6*	0	1	6	1	0	0	75.0	T	75.0	5	14.7*	0	4	0	0	1	0	80.0	T	80.0
217	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
218	9	32.1*	0	0	7	2	0	0	77.8	T	77.8	7	20.6*	1	5	0	1	0	0	71.4	T	71.4
219	4	14.3*	0	0	4	0	0	0	100.0	T	100.0	3	8.8	1	1	1	0	0	0	33.3	MM	0.0
220	5	17.9*	0	0	5	0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
221	10	35.7*	1	1	8	0	0	0	80.0	T	80.0	17	50.0*	1	3	0	13	0	0	17.6	D	76.5
222	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
223	6	21.4*	1	1	4	0	0	0	66.7	T	66.7	2	5.9	1	1	0	0	0	0	50.0	IT	50.0
224	4	14.3*	0	0	4	0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
225	6	21.4*	1	0	5	0	0	0	83.3	T	83.3	0	0.0	0	0	0	0	0	0	0.0		0.0
226	5	17.9*	0	0	5	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
227	6	21.4*	1	0	4	1	0	0	66.7	T	66.7	4	11.8*	1	2	0	1	0	0	50.0	T	50.0
228	4	14.3*	0	1	2	1	0	0	50.0	T	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
229	2	7.1	0	0	2	0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
230	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
231	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
232	5	17.9*	1	0	4	0	0	0	80.0	T	80.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
233	7	25.0*	1	1	4	1	0	0	57.1	T	57.1	0	0.0	0	0	0	0	0	0	0.0		0.0
234	5	17.9*	0	0	4	1	0	0	80.0	T	80.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
235	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	5	14.7*	2	2	0	1	0	0	40.0	IT	40.0
236	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
237	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
238	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
239	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
240	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0

TASK	POSSIBLE TO IMPROVE		DISTRIBUTION OF MEANS FOR IMPROVEMENT							MODE		POORLY PERFORMED		DISTRIBUTION OF REASONS FOR POOR PERFORMANCE							MODE	
	N	%	H	D	T	R	?	O	%T	MO	%	N	%	I	T	M	D	?	O	%T	MO	%
241	3	10.7*	0	1	2	0	0	0	66.7	T	66.7	1	2.9	1	0	0	0	0	0	0.0	I	100.0
242	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	2	5.9	2	0	0	0	0	0	0.0	I	100.0
243	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
244	5	17.9*	0	0	5	0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
245	5	17.9*	2	2	1	0	0	0	20.0	HD	40.0	6	17.6*	0	2	0	4	0	0	33.3	D	66.7
246	7	25.0*	0	3	4	0	0	0	57.1	T	57.1	0	0.0	0	0	0	0	0	0	0.0		0.0
247	4	14.3*	0	0	4	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
248	5	17.9*	0	1	2	2	0	0	40.0	TR	40.0	7	20.6*	3	0	0	4	0	0	0.0	D	57.1
249	6	21.4*	0	0	6	0	0	0	100.0	T	100.0	4	11.8*	1	1	0	2	0	0	25.0	D	50.0
250	5	17.9*	0	0	5	0	0	0	100.0	T	100.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
251	2	7.1	0	0	1	0	1	0	50.0	T?	50.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
252	2	7.1	1	0	1	0	0	0	50.0	HT	50.0	3	8.8	0	3	0	0	0	0	100.0	T	100.0
253	5	17.9*	0	0	4	1	0	0	80.0	T	80.0	3	8.8	2	0	0	1	0	0	0.0	I	66.7
254	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	1	2.9	1	0	0	0	0	0	0.0	I	100.0
255	6	21.4*	0	0	4	0	1	1	66.7	T	66.7	2	5.9	1	0	0	1	0	0	0.0	ID	50.0
256	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	1	2.9	1	0	0	0	0	0	0.0	I	100.0
257	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
258	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
259	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
260	4	14.3*	0	0	4	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
261	6	21.4*	0	0	4	2	0	0	66.7	T	66.7	4	11.8*	1	3	0	0	0	0	75.0	T	75.0
262	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
263	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	1	2.9	0	0	1	0	0	0	0.0	M	100.0
264	2	7.1	0	0	2	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
265	1	3.6	0	0	0	0	0	0	0.0		0.0	4	11.8*	0	3	0	0	0	1	75.0	T	75.0
266	0	0.0	0	0	0	0	0	0	0.0		0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
267	1	3.6	0	0	0	1	0	0	0.0	R	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
268	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
269	0	0.0	0	0	0	0	0	0	0.0		0.0	3	8.8	0	2	0	1	0	0	66.7	T	66.7
270	6	21.4*	0	0	6	0	0	0	100.0	T	100.0	7	20.6*	1	2	0	4	0	0	28.6	D	57.1
271	11	39.3*	0	0	8	2	0	0	80.0	T	80.0	4	11.8*	1	3	0	0	0	0	75.0	T	75.0
272	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
273	2	7.1	0	0	2	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
274	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	2	5.9	1	0	0	1	0	0	0.0	ID	50.0
275	4	14.3*	1	1	2	0	0	0	50.0	T	50.0	2	5.9	2	0	0	0	0	0	0.0	I	100.0

TASK	POSSIBLE TO IMPROVE		DISTRIBUTION OF MEANS FOR IMPROVEMENT							MODE		POORLY PERFORMED		DISTRIBUTION OF REASONS FOR POOR PERFORMANCE							MODE	
	N	%	H	D	T	R	?	O	%T	MO	%	N	%	I	T	M	L	?	O	%T	MO	%
276	3	10.7*	0	1	2	0	0	0	66.7	T	66.7	2	5.9	2	0	0	0	0	0	0.0	I	100.0
277	3	10.7*	0	1	2	0	0	0	66.7	T	66.7	3	8.8	3	0	0	0	0	0	0.0	I	100.0
278	5	17.9*	1	1	2	0	1	0	40.0	T	40.0	2	5.9	2	0	0	0	0	0	0.0	I	100.0
279	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
280	0	0.0	0	0	0	0	0	0	0.0		0.0	3	8.8	2	1	0	0	0	0	33.3	I	66.7
281	4	14.3*	1	0	2	0	1	0	50.0	T	50.0	4	11.8*	4	0	0	0	0	0	0.0	I	100.0
282	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	1	2.9	1	0	0	0	0	0	0.0	I	100.0
283	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	2	5.9	1	0	0	1	0	0	0.0	ID	50.0
284	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	2	5.9	2	0	0	0	0	0	0.0	I	100.0
285	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	2	5.9	2	0	0	0	0	0	0.0	I	100.0
286	5	17.9*	1	1	3	0	0	0	60.0	T	60.0	2	5.9	1	0	0	0	0	1	0.0	ID	50.0
287	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	2	5.9	2	0	0	0	0	0	0.0	I	100.0
288	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	2	5.9	1	1	0	0	0	0	50.0	IT	50.0
289	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	2	5.9	2	0	0	0	0	0	0.0	I	100.0
290	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	2	5.9	2	0	0	0	0	0	0.0	I	100.0
291	5	17.9*	1	0	4	0	0	0	80.0	T	80.0	4	11.8*	0	2	1	1	0	0	50.0	T	50.0
292	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
293	5	17.9*	1	0	4	0	0	0	80.0	T	80.0	3	8.8	0	1	1	1	0	0	33.3	MM	0.0
294	2	7.1	0	0	2	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
295	2	7.1	0	0	2	0	0	0	100.0	T	100.0	2	5.9	0	1	0	1	0	0	50.0	TD	50.0
296	5	17.9*	0	0	5	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
297	2	7.1	0	0	2	0	0	0	100.0	T	100.0	2	5.9	0	1	0	1	0	0	50.0	TD	50.0
298	3	10.7*	0	0	2	1	0	0	66.7	T	66.7	4	11.8*	0	1	0	2	1	0	25.0	D	50.0
299	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	3	8.8	0	0	0	2	1	0	0.0	D	66.7
300	2	7.1	0	0	2	0	0	0	100.0	T	100.0	5	14.7*	0	3	0	2	0	0	60.0	T	60.0
301	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	2	5.9	1	0	0	1	0	0	0.0	ID	50.0
302	2	7.1	0	0	2	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
303	2	7.1	0	0	2	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
304	0	0.0	0	0	0	0	0	0	0.0		0.0	3	8.8	0	1	0	1	1	0	33.3	MM	0.0
305	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
306	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
307	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
308	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
309	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	1	2.9	0	0	1	0	0	0	0.0	M	100.0
310	1	3.6	0	0	0	1	0	0	0.0	R	100.0	2	5.9	1	1	0	0	0	0	50.0	IT	50.0

TASK	POSSIBLE TO IMPROVE		DISTRIBUTION OF MEANS FOR IMPROVEMENT							MODE		POORLY PERFORMED		DISTRIBUTION OF REASONS FOR POOR PERFORMANCE							MODE	
	N	%	M	D	I	R	?	O	%T	MO	%	N	%	I	T	M	D	?	O	%T	MO	%
311	4	14.3*	0		3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
312	3	10.7*	0	1	1		0	0	33.3	MM	0.0	0	0.0	0	0	0	0	0	0	0.0		0.0
313	1	3.6	0	0	1	(	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
314	1	3.6	1	0	0	0	0	0	0.0	M	100.0	2	5.9	0	[illegible]	0	0	1	0	50.0	T?	50.0
315	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	1	2.9	0	0	0	0	1	0	0.0	?	100.0
316	5	17.9*	1	0	4	0	0	0	80.0	T	80.0	3	8.8	0	2	1	0	0	0	66.7	T	66.7
317	0	0.0	0	0	0	0	0	0	0.0		0.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
318	2	7.1	0	0	2	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
319	1	3.6	0	0	1	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
320	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
321	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
322	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
323	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
324	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
325	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
326	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
327	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
328	4	14.3*	0	0	3	1	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
329	3	10.7*	0	0	2	1	0	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
330	2	7.1	0	0	1	1	0	0	50.0	TR	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
331	5	17.9*	0	0	4	1	0	0	80.0	T	80.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
332	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	2	5.9	1	0	1	0	0	0	0.0	IM	50.0
333	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	4	11.8*	0	4	0	0	0	0	100.0	T	100.0
334	6	21.4*	0	0	4	1	0	1	66.7	T	66.7	5	14.7*	1	2	0	1	1	0	40.0	T	40.0
335	1	3.6	0	0	1	0	0	0	100.0	T	100.0	2	5.9	0	2	0	0	0	0	100.0	T	100.0
336	1	3.6	0	0	1	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
337	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	2	5.9	1	1	0	0	0	0	50.0	IT	50.0
338	5	17.9*	0	0	5	0	0	0	100.0	T	100.0	2	5.9	1	1	0	0	0	0	50.0	IT	50.0
339	5	17.9*	1	1	2	0	1	0	40.0	T	40.0	1	2.9	0	0	0	0	1	0	0.0	?	100.0
340	3	10.7*	0	1	2	0	0	0	66.7	T	66.7	2	5.9	0	0	2	0	0	0	0.0	M	100.0
341	4	14.3*	0	0	4	0	0	0	100.0	T	100.0	2	5.9	1	0	0	0	1	0	0.0	I?	50.0
342	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
343	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
344	5	17.9*	1	0	3	0	1	0	60.0	T	60.0	0	0.0	0	0	0	0	0	0	0.0		0.0
345	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	0	0	0	0	1	0	0.0	?	100.0

	POSSIBLE TO IMPROVE		DISTRIBUTION OF MEANS FOR IMPROVEMENT							MODE		POORLY PERFORMED		DISTRIBUTION OF REASONS FOR POOR PERFORMANCE							MODE	
TASK	N	%	H	D	T	R	?	O	%T	MO	%	N	%	I	T	M	D	?	O	%T	MO	%
346	4	14.3*	1	0	4	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
347	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
348	4	14.3*	1	0	2	1	0	0	50.0	T	50.0	2	5.9	0	1	0	1	0	0	50.0	TD	50.0
349	6	21.4*	1	0	3	1	1	0	50.0	T	50.0	12	35.3*	1	4	0	7	0	0	33.3	D	58.3
350	3	10.7*	0	0	2	1	0	0	66.7	T	66.7	3	8.8	2	0	0	1	0	0	0.0	I	66.7
351	7	25.0*	1	0	3	2	1	0	42.9	T	42.9	5	14.7*	1	2	0	2	0	0	40.0	TD	40.0
352	4	14.3*	1	0	2	1	0	0	50.0	T	50.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
353	8	28.6*	1	1	5	1	0	0	62.5	T	62.5	9	26.5*	0	2	0	7	0	0	22.2	D	77.8
354	1	3.6	0	0	1	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
355	2	7.1	0	0	1	1	0	0	50.0	TR	50.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
356	2	7.1	0	0	1	1	0	0	50.0	TR	50.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
357	2	7.1	0	0	1	1	0	0	50.0	TR	50.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
358	1	3.6	0	0	1	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
359	1	3.6	0	0	1	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
360	2	7.1	0	0	2	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
361	2	7.1	0	0	2	0	0	0	100.0	T	100.0	2	5.9	0	1	0	1	0	0	50.0	TD	50.0
362	1	3.6	0	0	1	0	0	0	100.0	T	100.0	1	2.9	0	0	0	1	0	0	0.0	D	100.0
363	5	17.9*	0	0	5	0	0	0	100.0	T	100.0	8	23.5*	1	3	0	4	0	0	37.5	D	50.0
364	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	0	0.0	0	0	0	0	0	0	0.0		0.0
365	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
366	4	14.3*	1	0	3	0	0	0	75.0	T	75.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
367	3	10.7*	1	0	2	0	0	0	66.7	T	66.7	2	5.9	2	0	0	0	0	0	0.0	I	100.0
368	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	1	2.9	1	0	0	0	0	0	0.0	I	100.0
369	1	3.6	1	0	0	0	0	0	0.0	H	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
370	0	0.0	0	0	0	0	0	0	0.0		0.0	2	5.9	1	0	0	1	0	0	0.0	ID	50.0
371	2	7.1	1	1	0	0	0	0	0.0	HD	50.0	2	5.9	1	0	1	0	0	0	0.0	IM	50.0
372	1	3.6	1	0	0	0	0	0	0.0	H	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
373	2	7.1	1	1	0	0	0	0	0.0	HD	50.0	2	5.9	2	0	0	0	0	0	0.0	I	100.0
374	2	7.1	1	1	0	0	0	0	0.0	HD	50.0	1	2.9	0	0	1	0	0	0	0.0	M	100.0
375	3	10.7*	0	0	2	0	1	0	66.7	T	66.7	0	0.0	0	0	0	0	0	0	0.0		0.0
376	3	10.7*	0	0	3	0	0	0	100.0	T	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
377	2	7.1	1	1	0	0	0	0	0.0	HD	50.0	0	0.0	0	0	0	0	0	0	0.0		0.0
378	1	3.6	1	0	0	0	0	0	0.0	H	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
379	1	3.6	1	0	0	0	0	0	0.0	H	100.0	0	0.0	0	0	0	0	0	0	0.0		0.0
380	5	17.9*	2	2	1	0	0	0	20.0	HD	40.0	1	2.9	0	1	0	0	0	0	100.0	T	100.0
TOTALS:	168		85	788	104	25	9					182		175	69	170	13	3				

Table C-8

Summary of Tasks by Percent of Workers Performing

Based on the 60 workers in Group 1 answering Question 1, Table C-8 summarizes the tasks performed by varying percentages of those persons. This shows 93 of the 380 tasks were performed by fewer than 20% of the workers. Tasks on which 50% or more of the workers indicated performance numbered 271.

TASK INVENTORY DATA SUMMARY
AUTO MECHANICS -- COMPOSITE

TABLE 8: SUMMARY OF TASKS BY PERCENT PERFORMING
(Q1)

PERCENTAGE RANGE	NO. TASKS	TASK NUMBERS
0 - 9	59	2 5 8 9 12 16 19 20 21 23 24 25 26 30 31 34 35 36 37 38 39 45 47 48 50 51 55 58 59 61 62 70 73 76 77 79 80 81 82 83 84 85 86 87 88 94 95 98 99 103 104 105 109 111 112 113 114 115 192
10 - 19	34	1 7 11 13 17 18 22 28 29 32 33 41 42 43 46 49 60 63 74 75 90 92 106 107 108 110 116 134 161 193 265 269 272 379
20 - 29	18	4 6 10 40 53 71 93 96 135 165 252 264 266 267 310 370 372 378
30 - 39	18	3 27 44 56 65 66 89 100 102 129 154 174 314 319 335 336 350 361
40 - 49	16	15 57 64 78 201 250 260 280 304 317 354 355 356 358 359 360
50 - 59	25	14 54 91 101 122 153 164 167 172 180 202 205 296 300 318 330 334 348 349 351 352 353 357 362 377
60 - 69	25	69 72 97 133 137 159 176 194 203 246 273 292 302 303 307 312 323 331 342 343 346 369 374 375 376
70 - 79	42	52 118 123 124 126 128 130 138 139 142 148 149 152 157 158 175 198 199 200 204 206 207 208 210 211 231 245 278 288 294 295 297 298 299 313 322 325 333 338 344 373 380
80 - 89	73	67 68 119 120 121 122 127 131 136 141 143 144 145 146 147 150 151 156 170 171 173 177 178 179 181 182 183 184 185 186 187 189 190 191 195 196 197 209 214 222 227 232 243 248 251 259 261 271 274 276 279 283 286 291 293 309 311 315 320 321 324 326 327 329 339 340 341 347 365 366 367 368 371
90 -100	70	117 132 140 155 160 162 163 166 168 169 188 212 213 215 216 217 218 219 220 221 223 224 225 226 228 229 230 233 234 235 236 237 238 239 240 241 242 244 247 249 253 254 255 256 257 258 262 263 268 270 275 277 281 282 284 285 287 289 290 301 305 306 308 316 328 332 337 345 363 364

Table C-9

Summary of Tasks by Percent

of Supervisors Desiring Performance

Based on all 74 supervisors in Groups 1 and 2 answering Question 2, Table C-9 summarizes the tasks that varying percentages of those persons said should be performed by their workers. The table notes 28 of the 380 tasks were checked as relevant by fewer than 20% of the supervisors. Tasks on which 50% or more of the supervisors desired performance numbered 271, with 165 of these checked by at least 90% of the supervisors.

TASK INVENTORY DATA SUMMARY
AUTO MECHANICS -- COMPOSITE

TABLE 91 (Q2): SUMMARY OF TASKS BY PRCNT DESIRING PERF

PERCNTAGE RANGE	NO. TASKS	TASK NUMBERS
0 - 9	5	2 5 50 73 113
10 - 19	23	8 9 16 21 31 36 37 47 55 81 82 83 85 88 95 98 103 104 105 109 111 112 116
20 - 29	34	1 7 11 12 13 17 19 20 23 26 28 30 38 39 42 45 51 70 76 77 79 80 86 87 94 99 106 108 115 134 161 192 193 272
30 - 39	26	10 18 22 24 25 32 35 48 58 59 61 62 66 74 75 84 96 107 110 114 135 165 252 265 269 370
40 - 49	21	6 29 33 34 41 43 46 49 53 56 60 63 71 90 92 154 266 267 310 319 379
50 - 59	21	4 27 40 54 57 64 65 78 89 93 100 102 129 174 201 264 280 314 335 372 378
60 - 69	18	3 15 44 91 101 153 164 167 172 246 250 260 300 317 318 336 354 376
70 - 79	34	14 69 72 97 122 130 137 176 180 194 245 273 288 294 296 304 330 348 349 350 351 352 353 355 356 358 359 360 361 362 369 374 375 377
80 - 89	33	52 67 68 126 128 131 142 159 178 195 196 199 200 202 203 205 206 231 251 274 278 292 302 307 312 313 325 331 333 334 342 343 357
90 -100	165	117 118 119 120 121 123 124 125 127 132 133 136 138 139 140 141 143 144 145 146 147 148 149 150 151 152 155 156 157 158 160 162 163 166 168 169 170 171 173 175 177 179 181 182 183 184 185 186 187 188 189 190 191 197 198 204 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 232 233 234 235 236 237 238 239 240 241 242 243 244 247 248 249 253 254 255 256 257 258 259 261 262 263 268 270 271 275 276 277 279 281 282 283 284 285 286 287 289 290 291 293 295 297 298 299 301 303 305 306 308 309 311 315 316 320 321 322 323 324 326 327 328 329 332 337 338 339 340 341 344 345 346 347 363 364 365 366 367 368 371 373 380

APPENDIX D

TASK STATEMENTS NOT INCLUDED IN TABLE 1

Table 1 contains only those 321 tasks which were judged to be of reasonable relevance to the occupation of Automotive Mechanic. Other tasks in the total listing of 380 automotive maintenance tasks were apparently more appropriate to other job types within the occupational field. These 59 omitted tasks are listed here to permit identification with data in Appendix C.

These 59 tasks were the ones on which large numbers of either the workers or the supervisors indicated that the task was not or should not be performed by Automotive Mechanics. This selection was made when less than 10% of the Group 1 workers indicated they performed a task (Question 1), or less than 10% of all supervisors indicated their workers should perform a task (Question 2). Thus, if more than five workers and more than seven supervisors had checked a task, then it was included in the Table 1 summaries.

	Percent Who Now Do	
	Actual, by Workers	Desired by Supervisors
	%	%
DUTY A: ORGANIZING AND PLANNING		
2. Construct organizational or functional charts.	3	10
5. Develop working agreements with vehicle leasing organization.	2	7
8. Establish local procedures for preparing records and reports.	8	16
9. Establish local production standards.	0	19
12. Establish personnel requirements.	7	24
16. Plan and establish operational budgets.	2	14
19. Plan on-job training programs.	3	27
20. Prepare job descriptions.	7	20

		Actual, by Workers	Desired by Supervisors
		%	%
21.	Prepare payroll.	3	18
23.	Schedule outside shop work.	5	27
DUTY B:	SUPERVISING		
24.	Allocate space and equipment.	8	31
25.	Assign individuals to job positions.	8	34
26.	Complete mechanic proficiency ratings.	5	23
30.	Coordinate release of special equipment for testing and adjustment.	2	26
31.	Draft correspondence.	0	28
34.	Implement changes in maintenance procedures.	8	43
35.	Implement plans to check compliance with maintenance.	5	31
36.	Implement plans to report work stoppage.	0	15
37.	Implement training programs.	3	11
38.	Initiate personnel actions.	0	26
39.	Monitor safety programs.	8	28
45.	Schedule vacations.	7	30
47.	Supervise contract maintenance programs.	2	19
48.	Supervise mechanic specialist (such as, front end, transmission, brake and tune-up).	8	34
50.	Supervise vehicle body and fender repairman.	3	5

	Actual, by Workers	Desired by Supervisors
	%	%
51. Supervise servicing and preparation personnel.	7	30
DUTY C: EVALUATING AND INSPECTING		
55. Draft changes to the maintenance evaluation programs.	0	19
58. Evaluate individuals for promotions, or reassignment.	2	32
59. Evaluate safety programs.	7	36
61. Evaluate training programs.	2	32
62. Inspect equipment inventories.	7	39
70. Maintain surveillance over contract maintenance programs.	7	20
DUTY D: TRAINING		
73. Assign on-job-training supervisors.	2	8
76. Counsel individuals on training progress.	0	28
77. Counsel newly-assigned employees on promotion and educational opportunities.	3	27
79. Determine training requirements.	0	22
80. Evaluate need for individual or group training.	2	24
81. Evaluate training standards.	0	19
82. Maintain training progress and qualification records.	0	16
83. Monitor on-job-training programs.	0	16
84. Obtain training manuals.	7	35

		Actual, by Workers	Desired by Supervisors
		%	%
85.	Prepare or evaluate job proficiency guides.	0	11
86.	Rate progress of individuals in training.	0	27
87.	Rotate duty assignments of personnel for training purposes.	0	20
88.	Supervise training programs.	0	19
DUTY E:	PERFORMING MAINTENANCE CONTROL FUNCTIONS		
94.	Complete unsatisfactory reports.	5	27
95.	Compute average cost rates for mechanics.	2	14
98.	Establish or maintain correspondence files.	2	11
99.	Follow up on requisitions.	7	30
103.	Maintain charts, tables, and graphs on maintenance trends.	3	14
104.	Maintain daily work control logs or status boards.	8	18
105.	Maintain publication files.	3	14
109.	Prepare medical or accident reports.	0	15
111.	Prepare time and attendance or personnel rosters.	0	16
112.	Prepare vehicle deadline and work stoppage reports.	2	14
113.	Review commercial credit slips.	2	4

	Actual, by Workers	Desired by Supervisors
	%	%
114. Review records to see that maintenance is accomplished according to priority.	8	35
115. Spot check service orders.	7	28
DUTY G: MAINTAINING AND REPAIRING POWER TRAINS		
192. Straighten rear housing damaged in accidents.	8	20

☆ U. S. GOVERNMENT PRINTING OFFICE: 1976 — 660-749/16